

KESARAPALLE 1962

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WITH CONTRIBUTION BY M. D. KHARE

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1. INTRODUCTION

THE LARGE-SCALE EXCAVATIONS AT NAGARJUNAKONDA¹ IN DISTRICT GUNTUR, ANDHRA Pradesh, exposed relics from the Early Stone Age to the late medieval times, but the absence of cultural superimposition there made it difficult to work out a continuous sequence of cultures, specially from the neolithic to the early historical period. It was, therefore, felt that certain lacunae that existed could be bridged if some less-known sites in Guntur and Krishna Districts be examined in the light of recent experiences and with an awareness of new problems. Hence, a programme of exploring some sites in these Districts was undertaken during the year 1961-62 under the direction of the present author,² the main objectives being to find out:

¹H. Sarkar and B. N. Misra, *Nagarjunakonda* (New Delhi, 1972).

²*Indian Archaeology 1960-61—A Review* (1961), p. 1; 1961-62 (1964), p. 1.

(i) a site where megaliths were located close to a megalithic habitation, which could not be traced at Nagarjunakonda; (ii) the chronological position of the megalithic culture in relation to the neolithic or chalcolithic assemblage of the lower Krishna basin; (iii) the chronology of the megalithic culture in relation to the Ikshvāku period (third-fourth century); and (iv) the reason for the absence of the Rouletted Ware in the historical deposits of Nagarjunakonda.

In the course of the exploration several sites were examined, but Kesarapalle, near Gannavaram, proved to be an ideal one from all the above-mentioned points of view. Consequently, two sections, KSP-1 and KSP-2, were scraped to stratify the deposit and the mound was thoroughly explored. In this task, Shri B. Vidyadhara Rao, Antiquity Assistant of the former Nagarjunakonda Excavation Project, extended his ungrudging co-operation in supervising the excavation for which the author is much thankful. Shri M.S. Mani, who was also responsible for making the drawings ready for publication, Shri K.V. Ramana Rao and Shri P. R. K. Prasad Rao, Draftsmen, prepared all the drawings, while the photographic and survey-work were done by Shri G. Lakshminarayana, Photographer, and Shri M. N. Prasada Rao, Conservation Assistant, respectively; thanks are due to all these members of the Nagarjunakonda Excavation Project. The author is also indebted to Shri M. D. Khare, now Superintending Archaeologist, for his contribution of the section on pottery. At the time of the preparation of this Report, assistance was thankfully received also from Shri N. C. Ghosh and Shri B. M. Pande, now Deputy Superintending Archaeologists.

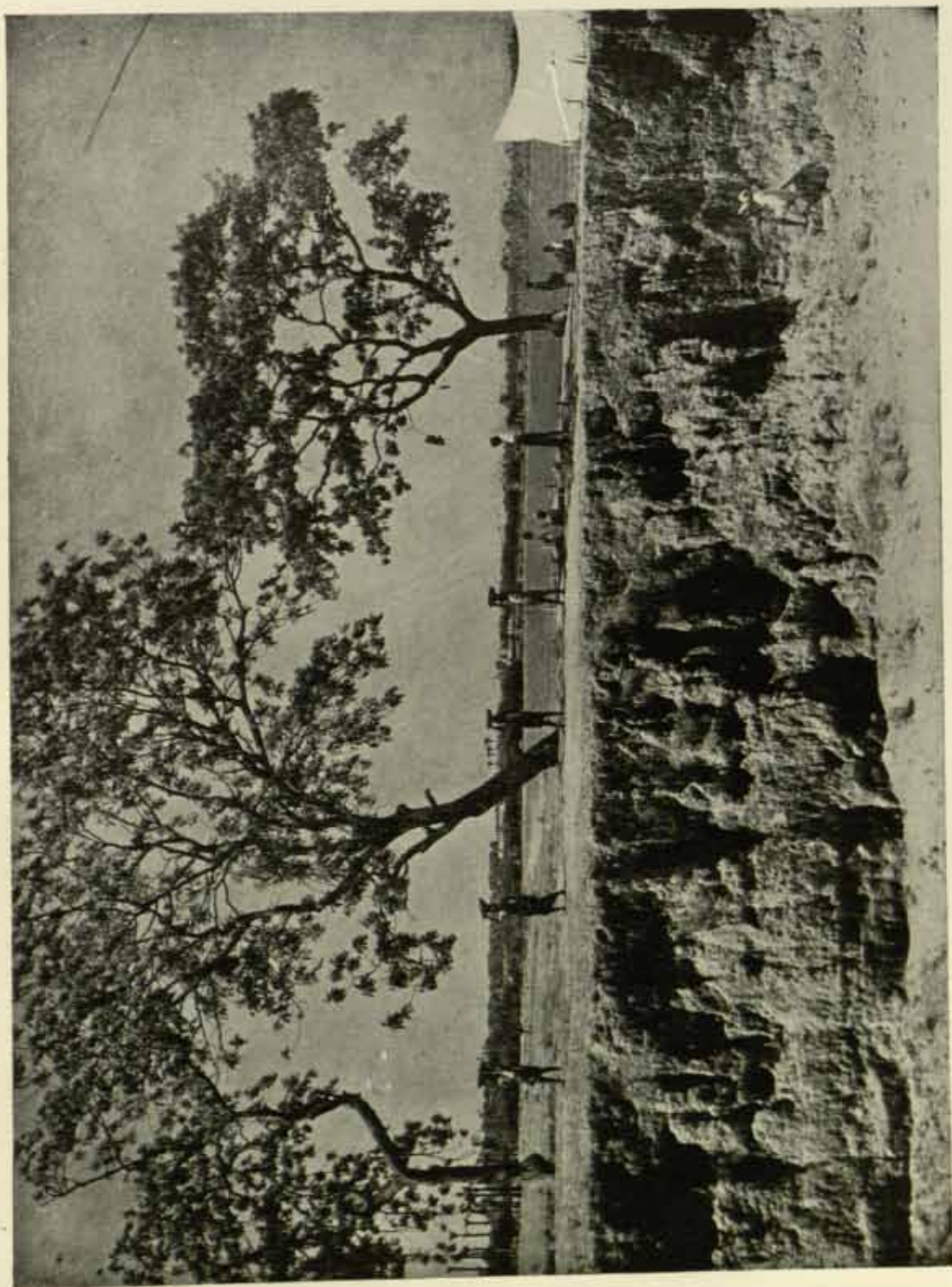
2. THE SITE AND ITS TOPOGRAPHY

Kesarapalle (16° 35' N; 81° 50' E), near Gannavaram (fig. 1), in Gannavaram Taluk of District Krishna, Andhra Pradesh, is situated about 21 km. to the east of Vijayawada, near an airport, on the Calcutta-Madras Trunk Road, which practically divides the mound into two halves. Though falling within the revenue jurisdiction of Kesarapalle, the actual mound lies close to the Gannavaram village which is only 1.6 km. to the south of Gannavaram railway station. The major part of the mound (pl. XIX) except the portion lying within the boundary of the airport was on the verge of being obliterated as a result of constant quarrying of earth (pls. XX and XXII A) locally known as *pāṭimannu*, which is considered very good for manure.

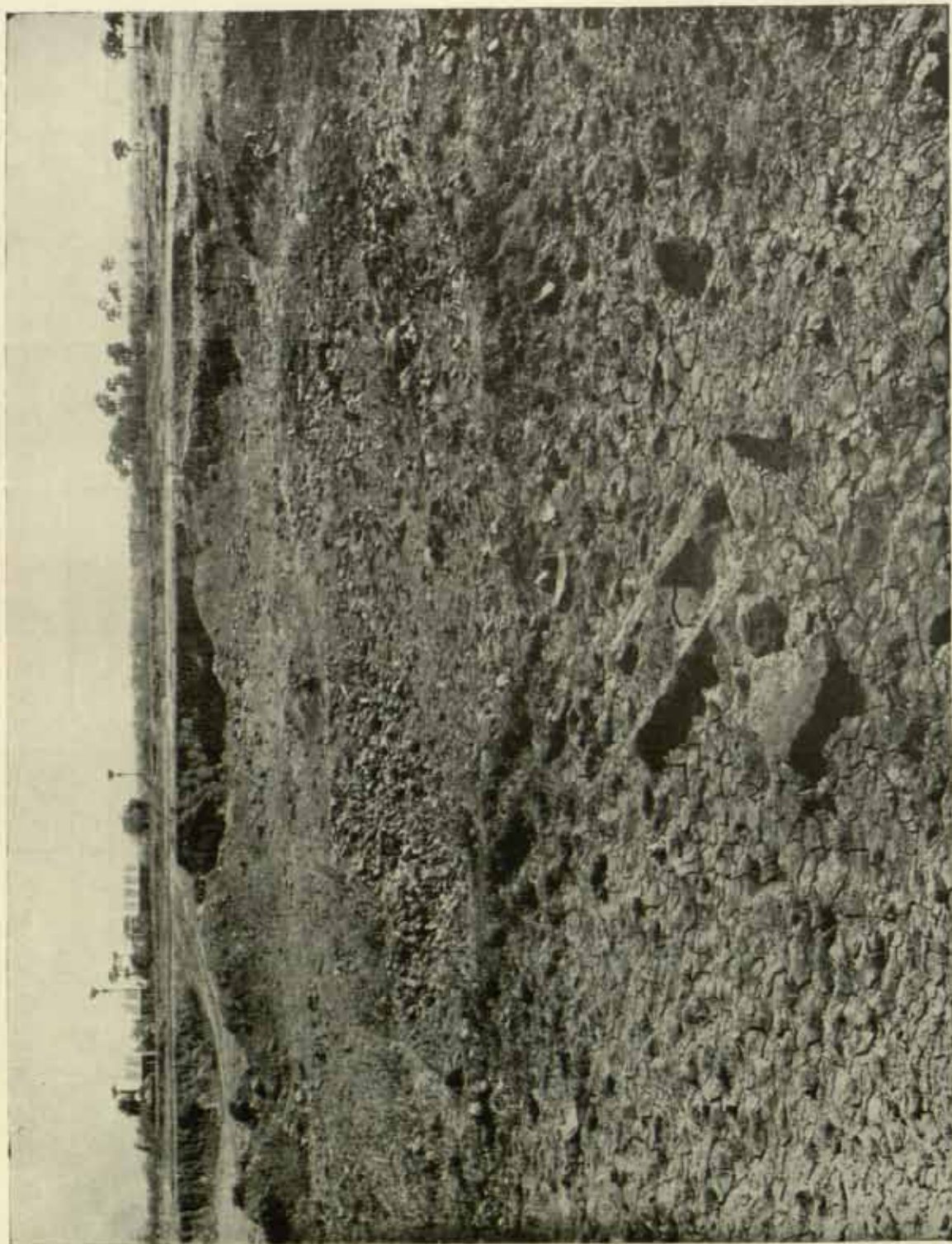
Despite the fact that Kesarapalle is known to be an ancient site to the local inhabitants and various legends have grown around its ruins, it had hardly attracted the attention of an archaeologist. Different parts of the mound have different local names—the portion falling within the jurisdiction of the airport being known as *bogam dibba* or 'harlot's mound' and the megalithic burial-site as *jāṅgal dibba* or 'the mound of phallus'. The 'king's mound' or *raju dibba* is situated close to the Gannavaram village.

The mound is quite extensive covering an area of about 1520 × 1200 m., the height of maximum deposit being 24 m. from the surrounding areas. A nullah, at present almost dry, flows from south-east to north-west: it might have been flowing at one time into the huge tank to the north of the mound. This tank appears to be a natural formation, so common in different parts of Krishna District.

The sandy deposit at the lowest level of the excavated trench and abundance of fresh-water shells in the lower strata, besides the presence of a tank-like formation nearby, may give an idea of a marshy land that lay close to the earliest settlement of this place. It is not unlikely that in olden times the nullah had a still wider channel allowing a greater volume of water to flow and the tank was larger than what is now. On the west, as the present landscape indicates, the tank might have been extended in ancient times up to



Kesarapalle: general view of a part of the mound with cutting KSP-2. See p. 38



Kesarapalle: general view of megalithic area with a cist in foreground. See pp. 38 and 51

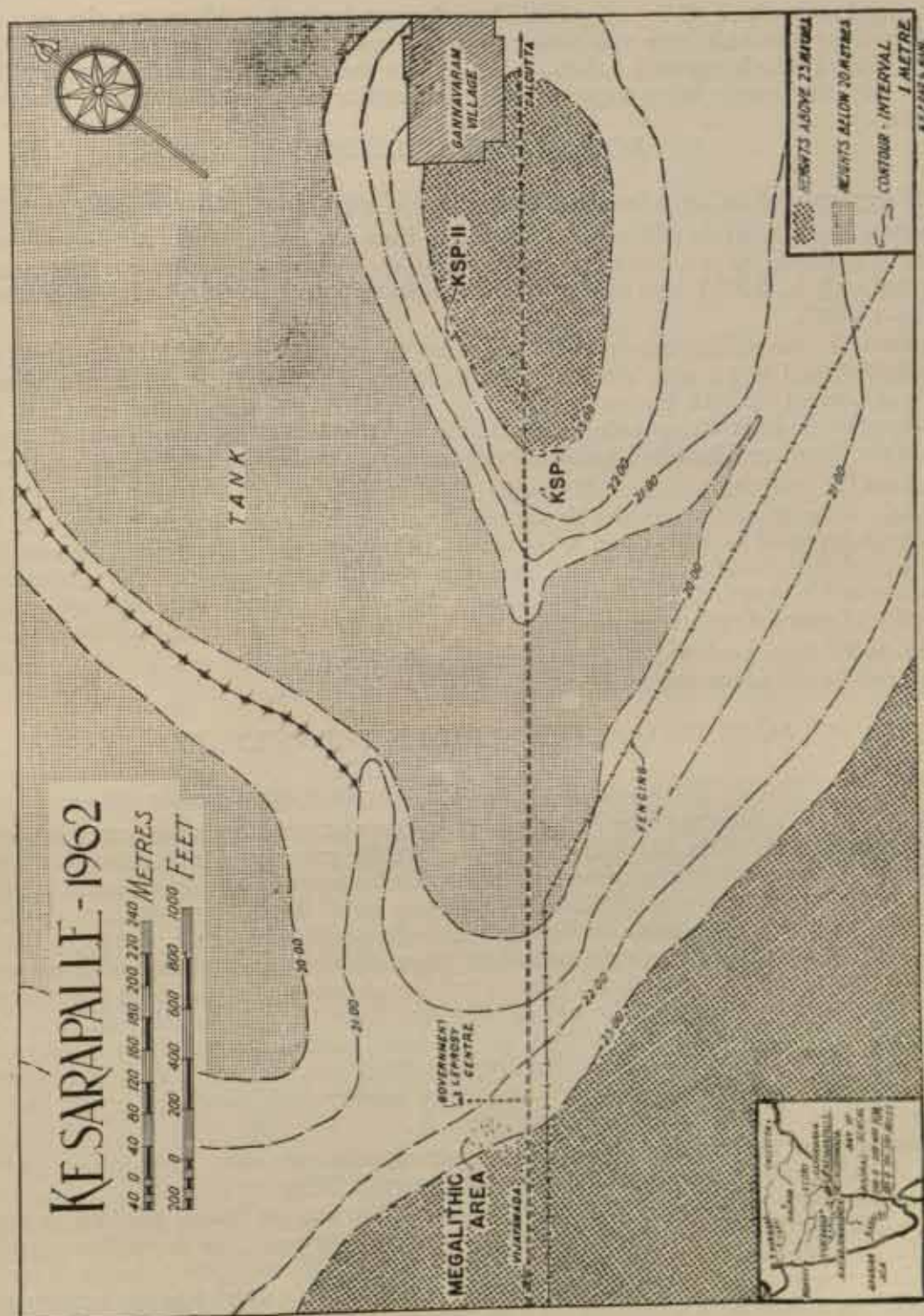


FIG. 1.

the red gravel area where all the megalithic burials were located. Moreover, the granite bed-rock in the megalithic area was found to have been superimposed by a stratum the upper horizon of which exposed a deposit of small to medium-sized water-worn pebbles (below, p. 50), the feature being suggestive of the existence of a perpetual stream of water in the vicinity.

3. SEQUENCE OF CULTURES

The sequence of cultures from the bottom to the top was as follows (figs. 2 and 3):

PERIOD I (chalcolithic culture).—It extended from the lowest level (the natural soil could not be reached) up to an average height of 2·60 m. The remains of this culture were encountered only in KSP-1, and its last phase was found interlocked with the succeeding megalithic culture.

PERIOD II (megalithic culture).—It extended to an average height of 2·40 m. or more in KSP-2 and had a wide extent at Kesarapalle. The occupational deposit of this culture was noticed in both the cuttings, but its lowest level could not be reached in KSP-2 owing to the high water-table; in KSP-1 the total height of this deposit was 1·40 m. A sherd of the Northern Black Polished Ware occurred from the upper levels of this culture.

PERIOD III (early historical).—It was divisible into two Sub-periods, III A and III B, on the basis of the occurrence of the Rouletted Ware which was infrequently met with in the earlier Sub-period in KSP-1 but was absent in the latter one. In KSP-2, Period III showed a total accumulation of 2·20 m., inclusive of the huge dump, but the distinction between the two Sub-periods here was not clear. But in other places of the mound, as the examination of exposed section revealed, the two Sub-periods could be easily distinguished.

PERIOD IV (late medieval).—This was represented in KSP-1 by a 1-m. thick deposit characterized by decadent pottery.

4. MAIN CHARACTERISTICS OF THE CULTURES

The main characteristics of the three cultures may be summarized as follows:

PERIOD I.—The pottery of the Period comprised grey or burnished grey ware and red and black wares, besides the black-and-red ware. While grey ware, either burnished or unburnished, showed the highest frequency, the black-and-red ware constitutes a subsidiary trend. The pottery was unpainted but for two small sherds—one of them depicting a design in black on greyish surface and the other white on black (below, p. 58). Other decorations consisted of simple incised or finger-tip designs confined either to grey or red ware and not on black-and-red ware; a solitary sherd of red ware bore a fragment of a graffito. Broadly speaking, the use of only five main types of vessels, viz., (i) the wide-mouthed jar used possibly for storage, (ii) the bowl, medium- or small-sized, (iii) the jar of medium size, (iv) the lid-cum-dish and (v) the stand, was attested. Very little could be ascertained in respect of other objects save a few pottery-discs, two bone points and a conical terracotta object of indeterminate use.

Abundance of animal bones, sometimes charred, may cast some light on the food-habits of this chalcolithic people who had perhaps special liking for the mollusc, heaps of shells of which, often in cluster, were unearthed. Of the animal bones, the bull or cow (*Bos indicus*), the buffalo (*Bos bubalis*), the goat (*Capra hircus aegagrus*), the sheep (*Ovis vignei*), the pig (*Sus cristatus*) and the spotted deer (*Axis axis*) were easily recognized; bones of birds and fish also came to light. Another noteworthy feature of this culture was the occurrence of large pits, sometimes with a diameter of 6 m.; in one instance, a pit was found cut inside

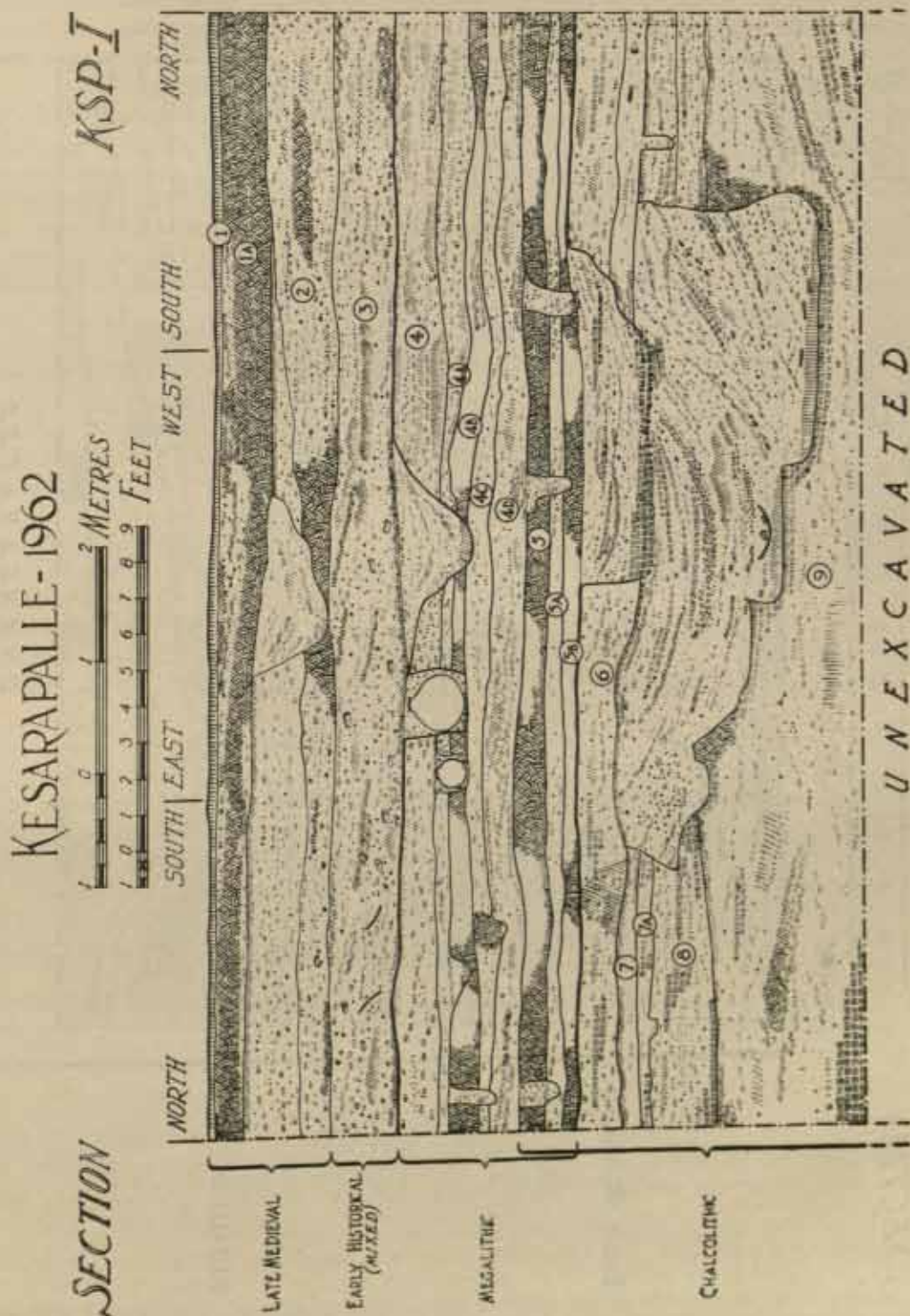


FIG. 2.

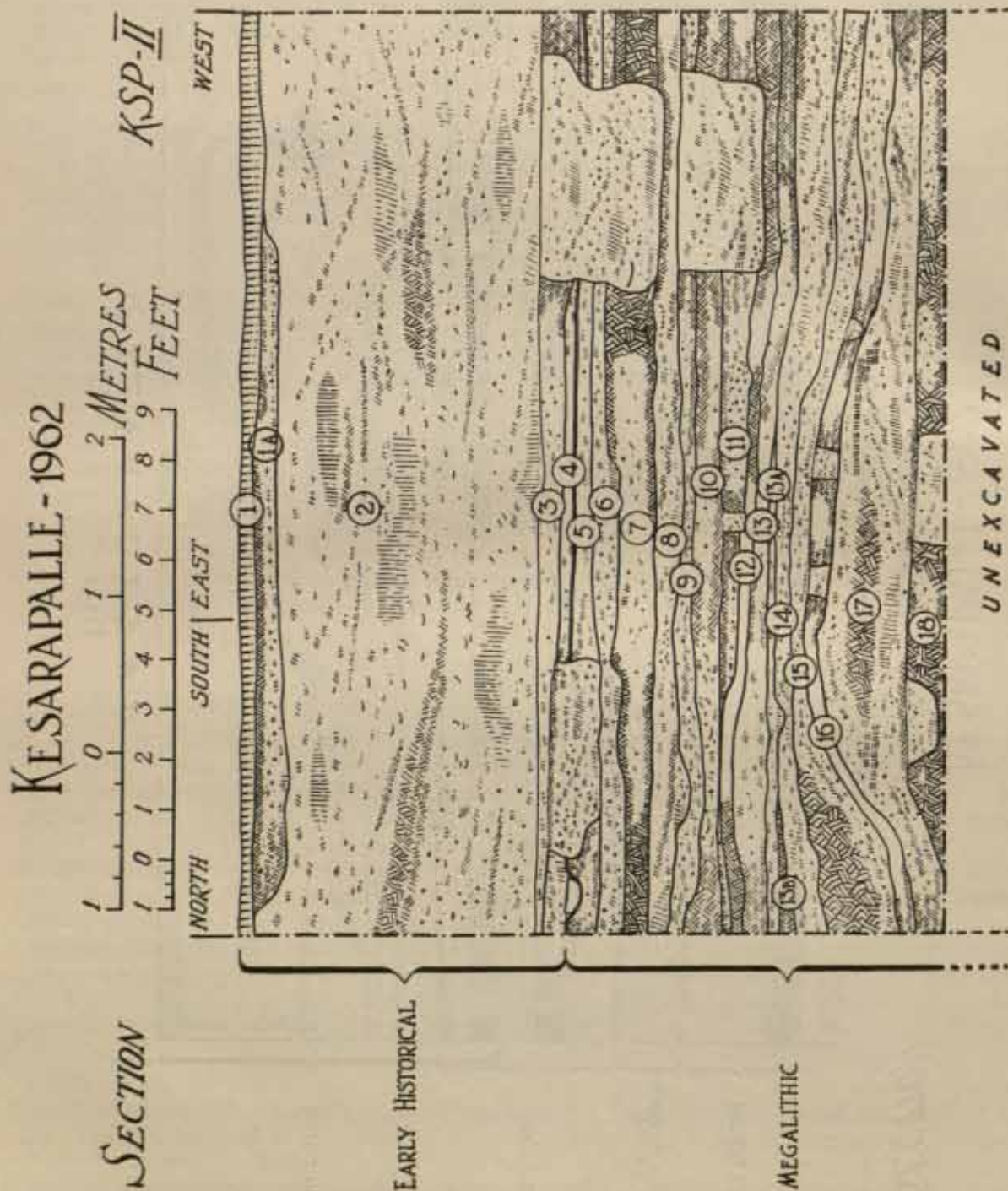


FIG. 3.

another.⁴ Burnt earth, bands of deposit of mollusc-shells, potsherds and bone fragments formed the main infilling of these pits. Again, in some cases they were edged by post-holes, varying in diameters from 18 to 25 cm.

The last phase of the chalcolithic culture showed a significant overlap with the megalithic, indicating the arrival of a new people with certain distinctive cultural traditions (below, p. 47). A terracotta spacer-bead with four horizontal perforations, a specimen of which was also recovered from the actual megalithic level, was the only object worth special mention.

PERIOD II.—For the first time iron made its appearance in this Period along with typical megalithic pottery. Painting; and decorations on pottery became almost non-existent; post-firing graffiti were noticed on a few pots. The types mainly comprised the deep bowl, vase, dish, lid-cum-bowl, jar, basin and urn; in frequency and variety, the deep bowls outnumbered any other type. Iron objects included mostly indeterminate pieces, although a spear-head and a wedge were discovered from the megalithic burial-site. A copper cylinder-circular-bead and a bone spacer-bead, similar to that of the preceding Period, came from this level.

The people lived in some shelters, for post-holes were quite common; some triangular depressions or pits, noticed in these levels, might have been used as some sort of hearths as these were filled in with chunks of burnt earth and ash. Animal bones were found in the same quantity as that of the previous period, but the occurrence of mollusc-shells showed a definite decline. In all likelihood, the people were responsible for the construction of cist-burials found near the modern Leprosy Hospital.

The occurrence of a sherd of the Northern Black Polished Ware from the upper level of the megalithic occupation in KSP-2 may indicate overlap of the two distinct pottery-traditions.

PERIOD III.—It has been divided into two Sub-periods on the basis of the occurrence of the Rouletted Ware in the earlier one and absence in the latter.

The Rouletted Ware appeared in Sub-period III A in KSP-1; it was, however, found overlying the occupational deposit of the megalithic culture in KSP-2. One of the sherds of the Ware, collected from the surface, had a riveting with iron pins. Other antiquities comprised iron nails with bent head, stone beads and a few shell objects.

Sub-period III B was only the continuation of the earlier one with the difference that the Rouletted Ware practically ceased to exist. A number of brick structures noticed in different parts of the mound probably belonged to this Sub-period. It is interesting to note that certain types in black-and-red ware continued.

PERIOD IV.—Very little could be ascertained in respect of this period which, in KSP-1, disclosed a decadent pottery-tradition similar to that of the late medieval times of Nagarjunakonda and Yeleswaram.

5. CHRONOLOGY

Except Period IV, the late medieval dating of which is obvious, there are only two more or less firm grounds in the chronology of Kesarapalle—the occurrence of a sherd of

⁴The occurrence of interlapping pits on a particular spot may suggest a time-interval, for no one in normal circumstances would dig pits within earlier ones in living memory. It may tend to show that the cultural deposits of this locality possibly represented the relics of groups, who might not have been wholly sedentary, notwithstanding their more or less homogeneous character.

the Northern Black Polished Ware from the upper levels of the megalithic culture and the Rouletted Ware in Sub-period III A. The characteristic Rouletted Ware bearing concentric rings of rouletted pattern round the interior of the base was dated at Arikamedu by its association with the imported Roman pottery like the Arretine Ware to the second quarter of the first century A.D.¹ On the basis of this evidence the beginning of Period III at Kesarapalle may easily be dated to the middle of the first century A.D. Whatever may be the reason, this distinctive ceramic industry disappeared in the subsequent Sub-period which was possibly coterminous with the Ikshvāku rule in the lower Krishna basin. It may be recalled here that Nagarjunakonda, which rose to prominence from the second quarter of the third century to about the first quarter of the fourth century, did not yield any Rouletted Ware. There are reasons to doubt whether this Ware had its use during the rule of the last few Sātavāhana kings who preceded the Ikshvākus and whose cultural vestiges in the form of coins and an inscription were discovered at Nagarjunakonda. Hence the period of the duration of the Rouletted Ware, consequently Period III A of Kesarapalle, may be dated from the middle of the first to at least the beginning of the third century.

It has not been possible to establish an overlap of the megalithic with the Rouletted Ware, though it is certain that the latter immediately followed the former at Kesarapalle. On the basis of the stratigraphic evidence at Sengamedu² one may as well assume an overlap of both the cultures and consider the middle of the first century A.D. as the *terminus ad quem* of the megalithic occupation of Kesarapalle: Brahmagiri³ as well as Maski⁴ also suggest the same date for the end of the megalithic cultures there. On the strength of these evidences it would be safe to fix the later limit of the megalithic deposit of Kesarapalle to about the middle of the first century A.D.

For computing the period of duration and determining the earlier limit of the megalithic culture one has to rely partly on the date of the Northern Black Polished Ware and partly on the reconstruction of time-scale based on stratified deposit. The sherd of the Northern Black Polished Ware, generally dated from the sixth century to second century B.C., occurred about 60 cm. below the uppermost limit of the megalithic occupation, which continued further down to a depth of 2 m. or more. Now, the discovery of an Aśokan inscription at Amaravati⁵ may indicate that the Northern Black Polished Ware reached Amaravati, Chebrolu and Kesarapalle by 250 B.C. when this Mauryan emperor started constructing *stūpas*, edicts and pillars in Andhra region. Moreover, the Āndhras, who are mentioned in the thirteenth Rock-edict of Aśoka, had been living within his dominion. That the Northern Black Polished Ware spread to the Andhra region by about 250 B.C. is, therefore, quite reasonable.

It has already been stated that 2-m. deposit of megalithic habitation lay beneath the stratum yielding the sherd of the Northern Black Polished Ware, and it is certainly not a wild conjecture to postulate that this accumulation should represent at least two

¹R. E. M. Wheeler, 'Brahmagiri and Chandravalli 1947: megalithic and other cultures in the Chitaldrug District, Mysore State', *Ancient India*, no. 4 (1948), p. 200. Also see, 'Arikamedu: an Indo-Roman trading-station on the east coast of India', *ibid.*, no. 2 (1946), pp. 34-49.

²N. R. Banerjee, 'The megalithic problem of Chingleput in the light of recent exploration', *Ancient India*, no. 12 (1966), p. 32.

³Wheeler, *op. cit.* (1948), p. 202.

⁴B. K. Thapar, 'Maski 1954: a chalcolithic site of the southern Deccan', *Ancient India*, no. 13 (1957), p. 20.

⁵D. C. Sircar, 'Fragmentary pillar inscription from Amaravati', *Epigraphia Indica*, XXXV, pt. 1 (1962), p. 43.

centuries. Thus, the beginning of the megalithic culture at Kesarapalle may be dated to the middle of the fifth century B.C., which, incidentally marked the closing phase of the chalcolithic period there as well.

There is another consideration for assuming middle of the fifth century B.C. as the upper limit of the megalithic culture at Kesarapalle. A few fragments of the dish in all-black ware, with inturned rim and blunt carination near the base (fig. 5, 19), reminiscent of similar types in the Painted Grey Ware¹ and in the assemblage associated with the Northern Black Polished Ware, came from the lower levels of the megalithic occupation—perhaps for the first time in the period of overlap. Again, a few sherds of deep bowl with a prominent rib around the body in the exterior (fig. 5, 18) have their parallels in Period I at Ujjain;² even the shiny grey slip on its reddish surface is similar to that of Ujjain. These evidences may tend to show that the megalithic culture of Kesarapalle came in contact in some way or the other with the ceramic tradition connected with the Northern Black Polished Ware quite early in the history and distribution of the latter. Also, it is not unlikely that the period of overlap represented the commingling of three trends, viz., chalcolithic, megalithic and a northern tradition associated with the Northern Black Polished Ware. Viewed from this angle, dating the megalithic culture to the middle of the fifth century B.C. may not appear far wide off the mark.³

One may as well argue on the basis of the same evidence that the contact of the megalithic culture with the Northern Black Polished Ware took place only in the second century B.C., that being the last-known chronological limit of the Northern Black Polished Ware; in other words, the end of the chalcolithic, the beginning of the megalithic and at the same time, the intrusion of the Northern Black Polished Ware tradition should have to be dated to the second century B.C. But the occurrence of the Northern Black Polished Ware sherd in an upper level of the megalithic culture precludes such a possibility, for a time-interval has to be postulated for the 2-m. megalithic deposit below the layer which produced the characteristic sherd; if the earlier contact were to take place by about the second century B.C., the latest date of the N.B.P. Ware at Kesarapalle has to be brought down to the early Christian era, which is most unlikely in view of the emergence of the Rouletted Ware in the middle of the first century A.D. In the circumstances, the arrival of certain trends associated with the Northern Black Polished Ware within the megalithic complex of the lower Krishna basin cannot be ruled out, and it happened by about the middle of the fifth century B.C., when the chalcolithic culture almost merged with the megalithic.

To fix up the early limit of the chalcolithic period is, however, fraught with difficulties in the absence of any firm datum. Undoubtedly, it should be dated posterior to the central Indian chalcolithic complex⁴ but how much later is not easy to guess. If the upper limit of the chalcolithic culture at Kesarapalle is dated to the middle of the fifth century B.C., its beginning may perhaps be assigned a date of *circa* 750 B. C.

¹B. B. Lal, 'Excavations at Hastināpura and other explorations', *Ancient India*, nos. 10 and 11 (1954 and 1955), p. 48, fig. 12, type XXV, and its variants of Period II.

²Information from Dr. N. R. Banerjee. Also see, *Indian Archaeology 1956-57—A Review*, pp. 24-25, fig. 12, 27.

³The beginning of the megalithic culture in the south has been dated to 700 B.C. by N. R. Banerjee in his paper entitled 'The chronology of megaliths in south India—a review', read before the International Conference on Asian Archaeology, New Delhi, 1961.

⁴For chronology based on Carbon-14 dates of some of these cultures see, B. B. Lal, 'A picture emerges—an assessment of the Carbon-14 datings of the protohistoric cultures of the Indo-Pakistan subcontinent', *Ancient India*, nos. 18 and 19 (1962 and 1963), pp. 214-16.

on the ground that a deposit of 2·40 m. should represent about three centuries. Though this is nothing but an assumption, yet in the present state of archaeological investigation this dating seems to be rational because of the following considerations. The chalcolithic culture of Kesarapalle appears to be later than Brahmagiri and Sanganakallu, both being dated to *circa* 1000 B.C., in view of the rarity of neolithic tools and the absence of microlithic industry at the present site. Similarly, it must have taken time for the black-and-red ware of the central Indian chalcolithic complex with its almost spent-up impulse, at least so far as the painted tradition is concerned, to travel to the lower Krishna basin. How much time it took to reach Kesarapalle is, however, difficult to ascertain, but in case one is inclined to recognize in this trend the dispersal of people as a sequel to the Aryan expansion in the south the provisional date of eighth century B.C. will not appear unreasonable, for the Āndhras as a people find their earliest mention in the *Aitareya-Brahmaṇa*, which was compiled prior to the sixth century B.C.

In summary, then, the tentative chronology of the occupational deposits at Kesarapalle is as follows:

PERIOD I : middle of the eighth to the middle of the fifth century B.C.

PERIOD II : middle of the fifth century B.C. to the middle of the first century A.D.

SUB-PERIOD III A : middle of the first century A.D. to the beginning of the third century A.D.

SUB-PERIOD III B : first or second quarter of the third century to the middle of the fourth century A.D.

PERIOD IV : late medieval.

6. DIFFERENT CULTURAL ELEMENTS

Though not much information in respect of composition and material equipment of different cultural phases of Kesarapalle could be gleaned due to the limited scope of the present operation, yet it has to be admitted that Kesarapalle provided for the first time a continuous index of cultures that flourished in the lower Krishna basin from the chalcolithic to the early historical period.

In the absence of any other suitable term, Period I of Kesarapalle has been designated here as 'chalcolithic' in spite of the fact that neither any stone implement nor even a bit of copper came to view in the excavation. It does not necessarily mean that these two items were completely absent, for they might have been missed in the restricted operation and may, let it be hoped, be brought to light by a large-scale operation. There are, however, indications of the use of neolithic celts in Period I because of the occurrence of two specimens on the surface. Moreover, the high water-table did not also allow the excavation to reach the natural soil; as a result, no information regarding the genesis of the chalcolithic phase there could be obtained.

Basically, this culture developed out of the neolithic tradition of the Deccan and Karnataka because of the higher frequency of burnished grey and its associated wares compared to that of the intrusive black-and-red ware of a probable central Indian association. At this stage it is but necessary to make it clear the sense in which the terms 'neolithic' and 'chalcolithic' are being used here without, however, entering into controversy as to their definitions and essential components. The term 'neolithic' is applied here to denote a cultural tradition characterized by the use of short-blade microliths, neoliths and burnished grey and other associated wares. This is not a hypothetical stage of cultural evolution since Nagarjunakonda displayed almost an

identical pattern. It was preceded at Nagarjunakonda by a still archaic phase devoid of burnished grey ware although the short-blade microlithic industry on chert and a crude red ware formed its basal elements; neoliths were extremely rare in this period. If this primitive trend marked the advent of the neolithic economy in the south, Brahmagiri I,¹ Sanganakallu II,² Maski P and Piklihal I,⁴ minus the intruding elements represented by painted pottery tradition, chert ribbon-flakes and copper or bronze, should signify its mature form. In fact, Sanganakallu II and some sites at Nagarjunakonda, where neither the painted pottery nor any long chert blades made their appearance, may be taken as nearer to true neolithic phase than any other site in the Deccan. The extraneous elements referred to above, which are collectively styled as 'chalcolithic', might have entered the Deccan from the north. Thus, the neolithic culture of the Deccan in some period of its development derived certain traits from one or more chalcolithic sources, thereby giving birth to mixed cultures in different parts of the plateau. That a substratum of neolithic tradition existed beyond the proper neolithic culture-zone may also be postulated from the occurrence of burnished grey ware in the lower levels of the sites like Nevasa,⁵ Daimabad,⁶ Bahal,⁷ Bahurupa,⁸ Nagda⁹ and Gilund¹⁰ but the temporal limit of this northward extension of the neolithic culture has yet to be worked out.

Now, the neolithic traits were represented at Kesarapalle only by the occurrence of burnished grey and its associated red wares, with types similar to those from Brahmagiri, Sanganakallu, Maski, Piklihal, Nagarjunakonda, etc. One of the characteristics of the neolithic culture of Nagarjunakonda was its association with pits of various dimensions, and Kesarapalle as well possessed them. At the same time, it is to be borne in mind that unlike Nagarjunakonda and Sanganakallu, Kesarapalle had no microliths, nor was its neolithic industry a prolific one. Admittedly, the black-and-red ware and a feeble trend of paintings thereon represented only a foreign element grafted on an old neolithic pattern which by then had lost many of its original traits. Evidence collected during the present dig is too meagre to suggest any definite source of inspiration for the black-and-red ware, but this ware has not been reported from Brahmagiri, Sanganakallu, Maski and Piklihal, where the common occurrence of long chert blades, painted pottery and, at some of these sites, of terracotta figurines indicated a common trend emanating from one horizon. Kesarapalle did not share any of these features, and as such one has to assume, to explain the occurrence of black-and-red ware at Kesarapalle, a distinct movement of traits or infiltration of ideas, if not a migration of people, from another region. Indeed some of the types, for instance 10 and 11 (fig. 4) and 15 (fig. 5) of Period I of Kesarapalle, bear comparison with those from different sites belonging to chalcolithic complex of central India and Rajasthan.

No generalization on the similarity in painted motifs should be hazarded because of their paucity at Kesarapalle. It can only be said that in both the painted sherds the

¹Wheeler, *op. cit.* (1948), pp. 223-25 (painted pottery) and pp. 250-53 (long chert blades).

²B. Subbarao, *Stone Age Cultures of Bellary* (Poona, 1948), p. 10.

³Thapar, *op. cit.*, pp. 38-40 (for painted pottery) and p. 90 (for long chert blades).

⁴F. R. Allchin, *Piklihal Excavations* (Hyderabad, 1960), pp. 56-57.

⁵H. D. Sankalia, S. B. Deo, Z. D. Ansari and S. Ehrhart, *From History to Prehistory at Nevasa (1954-56)* (Poona, 1960), p. 207.

⁶*Indian Archaeology 1958-59—A Review*, p. 15.

⁷*Ibid.*, 1956-57, p. 17.

⁸*Ibid.*, 1958-59, p. 24.

⁹*Ibid.*, 1955-56, p. 14.

¹⁰*Ibid.*, 1959-60, p. 41.

painting occurs in the interior: in one case in fugitive white and in the other in black on a grey surface. This practice of decorating the interior of the pot is noticed at Ahar, Bahurupa, Manoti and at a number of other sites.

It is evident from the foregoing that a trend from northern direction, maybe from central India, reached the lower Krishna basin and merged itself in the neolithic complex there. So far as the lower Krishna basin and, in particular, Kesarapalle are concerned, one may trace the arrival of three distinct trends in different periods, the earliest of which was a chalcolithic wave from somewhere in central India. At the last phase of this mixed culture came the megalith-builders with their characteristic pottery and burial-tradition; this was also the time when certain ceramic types associated with the Northern Black Polished Ware reached the scene. During this period certain trends, as exemplified in the pottery-types, had their continuity. Theoretically speaking, all cultural traits cannot suddenly vanish howsoever severe be the impact from outside. It is thus natural that the megalithic culture absorbed many features from the earlier or contemporary cultures and eventually proved to be the most dominant one in the lower Krishna valley some time in the fifth-fourth century B.C. That it was quite extensive too in this region is evident from wide distribution of megalithic monuments in Guntur and Krishna Districts.

7. SOME OBSERVATIONS ON THE CULTURAL SEQUENCE OF THE LOWER KRISHNA BASIN

It is necessary at this stage to assess how far the present operation fulfilled the main objectives as detailed above (p. 38). Undoubtedly, the excavation at Kesarapalle has bridged considerably the occupational hiatus noticed in the cultural sequence of Nagarjunakonda which, though bringing to light a continuous chain of evolution of cultures from the Early Stone Age to the neolithic, was deficient in the succeeding periods. In all likelihood, Periods I and II and Sub-period III A of Kesarapalle should come between the end of the neolithic culture of Nagarjunakonda on one hand and the rise of Ikshvāku power in the lower Deccan on the other. The cultures of the first two Periods and of the first Sub-period of the next of Kesarapalle possibly failed to penetrate into the secluded valley of Nagarjunakonda because of the fact that the region, being rocky, was not suitable for the development of food-producing economy. By and large, the chalcolithic cultures in India developed on riverine plains which assured a stability in the production or supply of food and also created a precondition for sedentary habits. Perhaps the megalith-using people followed the same tradition and built their settlements in the arable tract, though the actual megaliths were built on wastelands bordering the hills.

Nagarjunakonda did reveal several megalithic remains mainly grouped into two clusters, but unlike Kesarapalle no megalithic habitation could be located there despite a thorough search. Yet Kesarapalle is not the only site in the lower Krishna basin where the burials occurred in proximity to the actual settlement, for habitation mounds close to the megaliths have been noticed by the present writer at Motadaka¹ (pl. XXVI B) near Guntur and at Nimalipuram,² about 63 km. from Guntur. On the other hand, there are several sites in Guntur, Krishna and Nalgonda Districts where occupational deposits near the megalithic monuments seem to be absent altogether. Does it mean that some groups preferred to raise megaliths close to their habitation and the others far away

¹*Indian Archaeology 1960-61—A Review*, p. 1.

²*Ibid.*, 1961-62, p. 1.

from their settlements as the Pharaohs of Egypt did for the pyramids? Time has not come to put forth such a theory, but the reason for the absence of megalithic occupation at Nagarjunakonda will remain inexplicable unless it is assumed that this valley was used merely as a burial-ground of a particular group who might have had their settlement at a distant locality. The cultural assemblage recovered from the megaliths of Nagarjunakonda does not provide any clue as to their probable date, but the absence of typical megalithic pottery in the neolithic as well as the historical deposits there may indicate their chronological position subsequent to the neolithic culture of the valley though certainly anterior to the rise of the Ikshvākus.

Let it be mentioned here that the dating that has been suggested for the megalithic culture at Kesarapalle (above, p. 45) may not be applicable to all the groups located in the Krishna basin. Indeed, Krishna and Guntur Districts are quite rich in megalithic monuments, and as early as 1882 Robert Sewell¹ listed no less than two dozen sites, the maximum concentration of which were in Venukonda Taluk of Guntur District. In the circumstances, the date-range for all these groups is likely to vary considerably; further, they do not also conform to one type. So far as the knowledge of the present writer goes, at least four distinct groups may easily be defined, viz. (i) stone-circle with underground cist, (ii) stone-circle with burial-pit, (iii) dolmenoid-cist, and (iv) urn-burial. While Kesarapalle showed a predominance of underground cists, the authors of the Nagarjunakonda megaliths seemed to have some predisposition for burial-pits (pl. XXVI A); the latter feature was noticed also at the much-spoilt site at Lam, near Guntur. No specimen belonging to the third category has been excavated in Krishna and Guntur Districts, although at Yeleswaram, District Nalgonda, a number of similar megaliths were opened. So far only two regions, Amaravati and Yeleswaram, yielded urn-burials. Thus it is evident that the megalithic culture, possibly representing at least four cultural elements, had a widespread distribution in the lower Krishna basin, and that no definite scheme of chronology of these monuments can be evolved without systematic survey of the entire region.

It has already been stated that Nagarjunakonda megaliths antedated the historical ruins of the Ikshvākus because of the total absence of megalithic pottery and other artefacts in the latter deposits. That a time-interval of at least two centuries existed between the megaliths and the Ikshvāku remains may thus be affirmed on the evidence of Kesarapalle where the Rouletted Ware intervened between the two periods.

Lastly, the reason for the absence of the Rouletted Ware at Nagarjunakonda does not need any further explanation, for it appears that the Ware, particularly the technique of rouletting, had stopped by the time the Ikshvākus came to the scene.

8. DESCRIPTION OF THE CUTTINGS

CUTTING KSP-1

A trench (fig. 2; pl. XXI A) measuring 4 by 3 m. was laid at the site. It was dug to a depth of 5·80 m. from the surrounding ground-level, but the natural soil could not be reached due to high water-table (25th March, 1962). The occupational deposit revealed three main cultures, viz., chalcolithic, megalithic and late medieval, although some pottery belonging to early historical period was also recovered from layer 3. Layers 5,

¹Robert Sewell, *Lists of the Antiquarian Remains in the Presidency of Madras*, Archaeological Survey of South India, New Imperial Series, I (Madras, 1882), pp. 42-85.

5 A and 5 B represented the period of overlap of the chalcolithic with megalithic culture. Below this deposit was found the occupational débris, about 2·60 m. in height on an average (excluding the layers showing overlap), of the chalcolithic culture. This accumulation, divisible into five strata, layers 6, 7, 7 A, 8 and 9, disclosed two successive pits cut one within the other. The megalithic phase here had a maximum deposit of 1·40 m. represented by layers 4, 4 A, 4 B, 4 C and 4 D, yielding typical megalithic pottery and iron. Some post-holes, belonging possibly to some oblong hut, belonged to this period. The entire deposit appeared to be some sort of successive floor-levels with abundant patches of ash and burnt earth. A few regular depressions filled in with ash and burnt earth were identified as ovens. Above the megalithic habitational deposit lay a stratum, layer 3, of compact reddish brown earth, yielding mixed pottery including a Rouletted Ware sherd. Three uppermost layers with a total thickness of 1·10 m. exposed sherds of late medieval pottery.

CUTTING KSP-2

A trench (fig. 3) measuring 4 by 2 m. was laid at the bottom of an exposed section of the early historical period, with a view to stratify the entire deposit. Here also natural soil could not be reached owing to high water-table. The entire deposit comprising exposed as well as excavated portions had a maximum height of 4·60 m. and represented two main cultures, viz., megalithic and early historical. Only a maximum height of 2·40 m. on an average of megalithic occupational deposit could be exposed. Its bottom-most part disclosed a dump labelled as layer 17. Of the excavated portion, only layers 3 and 4 yielded the Rouletted Ware but no significant overlap with the megalithic culture was observed here. Layer 7 revealed a sherd of the Northern Black Polished Ware along with typical megalithic pottery. A huge dump, layer 2, of early historical times from which were recovered several sherds of the Rouletted Ware also, was found superimposed over layer 3. Layers 1 and 1 A yielded pottery ascribable to Period III B.

9. OBSERVATIONS ON SURFACE-EXPLORATIONS

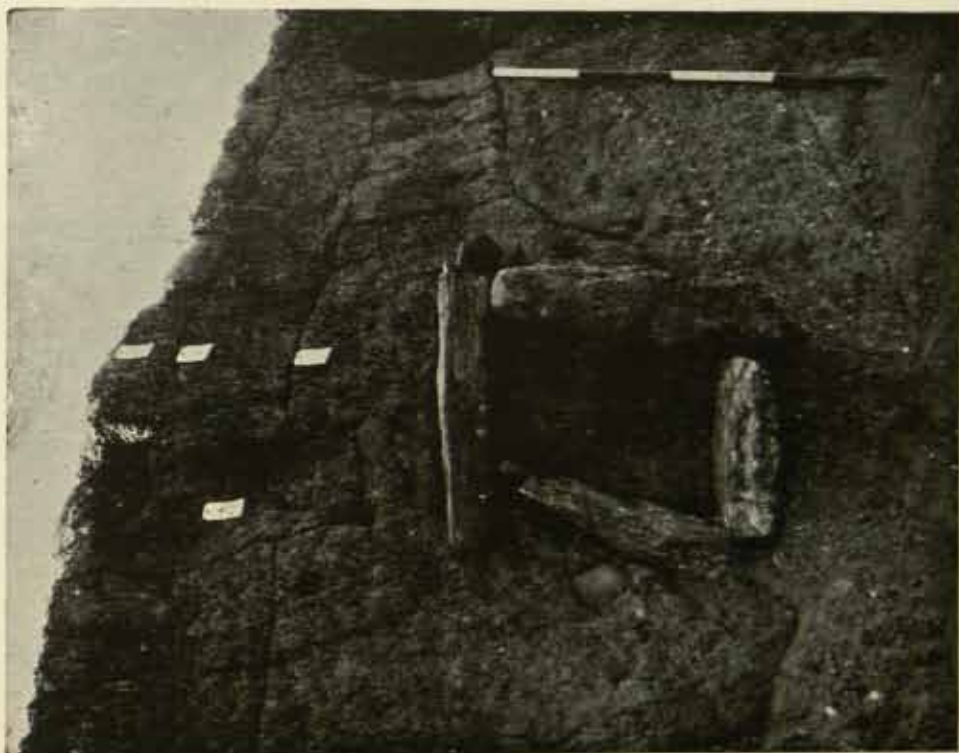
A. MEGALITHIC REMAINS

(i) Location

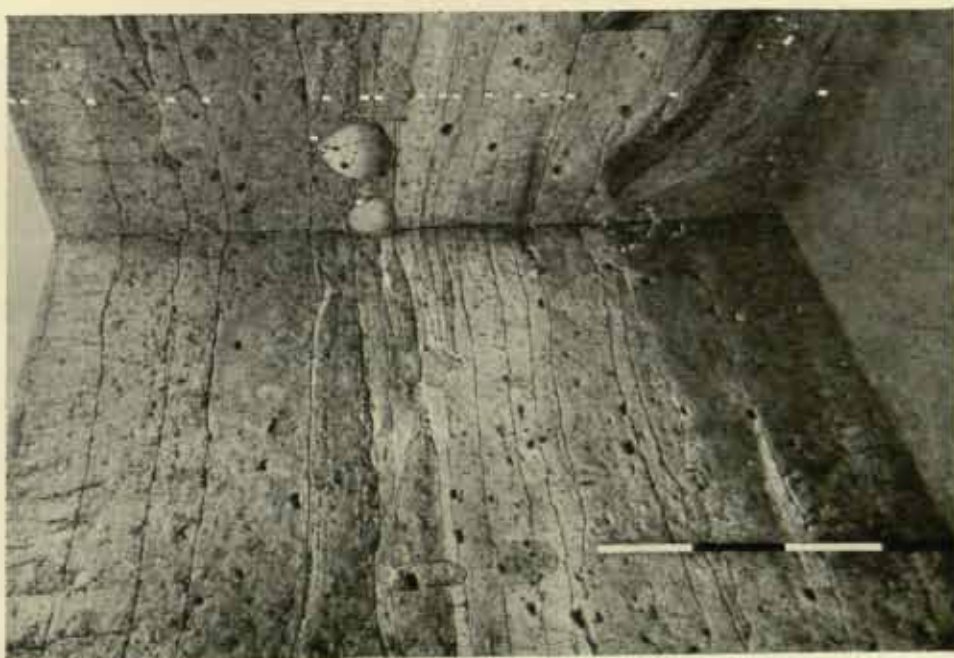
The megalithic remains, as revealed in the surface-exploration, covered an extensive area to the north of the Leprosy Hospital. There is a great likelihood of these burials extending below the compound of the said Hospital as well as within the limits of the aerodrome. Locally the area is known as *jāngal dībā* or *yarlā paḍu*, i.e., red soil area; this red soil was being quarried here for use as road-metal. The spoliation was so complete that hardly a slab was spared, though sometimes pottery can be traced lying *in situ*.

(ii) Stratigraphy

This wanton digging for red gravel left at the site many an exposed section providing an opportunity to study the stratigraphy of the site. Bed-rock, found at an average depth of 1·40 m. from the surrounding ground-level, consisted of pinkish granite; the upper portion of this stratum was quite soft presumably owing to some prolonged water absorption. This was superimposed by a dark-brown gravelly layer (layer 3), the upper part of which was full of small to medium-sized water-worn pebbles. It had an average



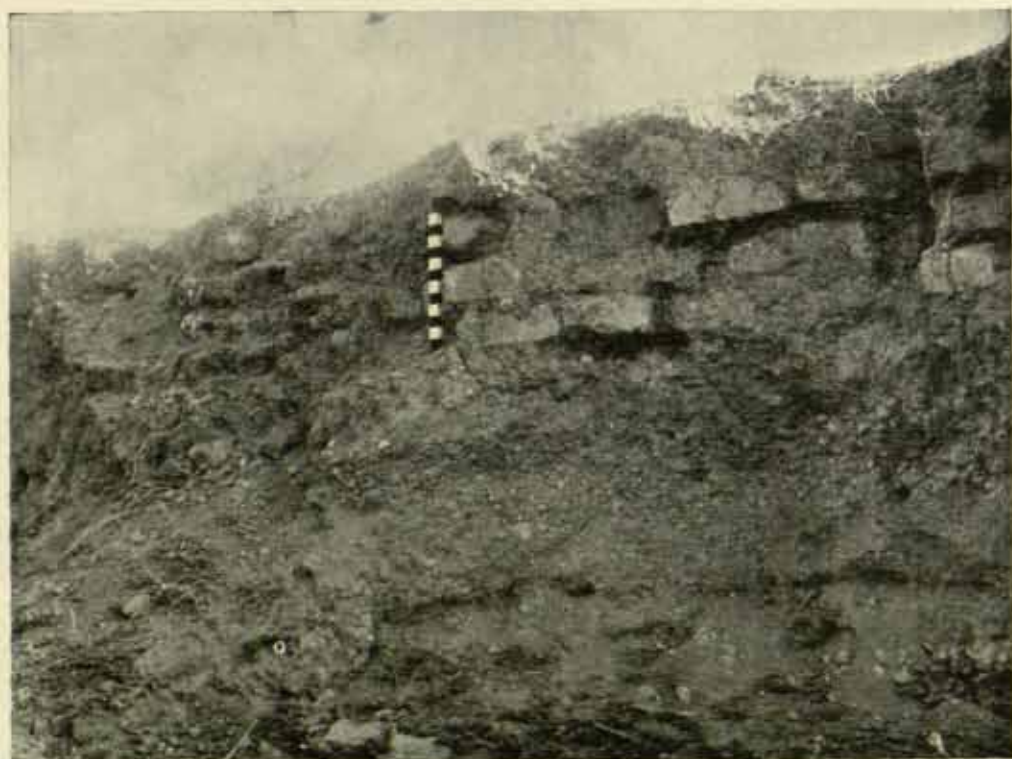
B. Kesarapalle: view of a megalithic cist in road-section. See p. 51



A. Cutting KSP-1. See p. 49



A. Kesarapalle: general view of a water-logged area with a megalithic cist in foreground. See pp. 38 and 51



B. Kesarapalle: brick structure of Sub-period IIIB in an exposed part of mound. See p. 51

thickness of about 80 cm. and was found overlain by a deposit (layer 2), about 50 cm. in thickness of light-brown gravel mixed with sand and earth. Broadly speaking, the size of these gravels was normally smaller than that in the underlying deposit (layer 3). All these layers were bereft of any cultural material, and the top-soil varied in thickness from 10 cm. to 60 cm.

Megaliths were dug either in the softer part of the bed-rock or in the reddish gravelly layer (layer 3); it is difficult to presume that this difference signifies the priority of one group over the other unless the working-levels for both could be determined. A partially-mutilated megalithic cist (pl. XXI B) noticed on the road-section had its pit cut into the gravelly-layer from the top of layer 2.

(iii) *Types of megaliths*

No visible remains of megaliths in the form of stone-circles or cairn-heaps could be noticed on the surface since these were buried under an accumulation varying in thickness from 10 cm. to 60 cm. Traces of stone-circles, however, were observed in the exposed sections. Only megalithic cists, presumably buried ones, came to light indicating the prevalence of a more or less uniform type of megalithic monuments. This inference was drawn after a careful examination of the available traces often represented either by a slab or mere impressions of slabs on the ground; on rare occasions all the four orthostats of a cist (pl. XX) were preserved. Capstones (pl. XXII A) dislodged from the original position were seen scattered here and there. Unfortunately, the contents of these chambers including the skeletal remains had been removed completely save a few pots and objects of iron. It may be recorded here that no port-hole was noticed on any of the available slabs, made generally of dressed granite.

Cists were laid invariably in north-south orientation and often in regularly-arranged groups. In length they ranged from 1.65 to 2.35 m., in width from 39 cm. to 1 m., in height from 45 to 90 cm. and in thickness from 9 to 15 cm.; one intact capstone measured 2.50 m. \times 1.35 m. \times 15 cm. Pottery must have been laid outside the oblong chamber and in some cases at least, also on the surface of the sealed pit, a practice noticed in certain cases at Nagarjunakonda and also at Lam, near Guntur. Besides pottery, the surface-exploration brought to view a few iron objects like a wedge and a spear-head.

B. STRUCTURAL REMAINS OF THE EARLY HISTORICAL PERIOD

Though the central part of the mound was practically devoid of any structure, the south-eastern and the north-western fringes of the mound revealed traces of some brick structures. The last-mentioned area seems to be the part of *rājū dibba* or 'king's mound' situated at the rear of the modern Gannavaram village: the extant brick structure covering an area of 50 sq. m. was represented in many places by four courses of brick (pl. XXII B), the average size of which was 41 \times 25 \times 8 cm. No definite plan could be made out but it appeared to be plundered ruins of a fairly big secular building which possibly came into existence in a period that immediately followed the disappearance of the Rouletted Ware.

To the west of the modern *Nāga*-temple and within the village jurisdiction of Kesarapalle were seen traces of a number of circular brick structures in which wedge-shaped bricks had been employed. The largest one had a diameter of about 1.77m.; on its opposite side were found three more examples arranged almost in a row and also equidistant from each other. It is difficult to guess the utility of these structures, with an extant height of about 40 cm. Their use as wells or soak-pits has to be ruled out

in view of their small dimensions and their occurrence in one particular area. It is not unlikely that these were used perhaps as some sort of bins for storing grains; this would explain their arrangement in some alignment and concentration on one spot. The pottery associated with these structures may be dated to *circa* third-fourth century A.D. because of their similarity with the Nagarjunakonda ceramic industry of that period. A lead coin, very similar to the Ikshvāku issue, came from an area not far away from these structures.

10. POTTERY

By M. D. KHARE

A. PERIOD I

(i) *General observations*

The wares available in Period I in order of frequency are grey, all-black, red and black-and-red. In some cases it is difficult to ascertain whether the broken rim-sherds belong to black-and-red ware or to black ware, as the type in both the wares are more or less similar.

The fabric of red ware is mostly coarse and occasionally medium. The paste could not be levigated properly as sand-particles and grit had been mixed into it. But the paste of the other three wares appears to have been prepared out of a better clay, the texture of which ranges from medium to fine without the presence of much sand and grit. Quite a few pots have an irregular interior, which shows that the potter did not pay much attention to it. But for a few huge jars and some rims, the entire pottery is made on a slow wheel; it is also proved by the availability of prominent wheel-grooves on the interior of some of the sherds. Paring-marks can also be seen on sherds of this period. In some instances wheel-made rims have been luted to the hand-made bodies.

The red ware is mostly well-fired, although there are cases of bad firing as indicated by grey or black core of thick jars and black patches on red surface. Carelessly-levigated paste as well as the thick section of the pottery may suggest that pots could not be fired to a high degree of temperature. Thin-sectioned black-and-red and black-slipped wares and thick grey ware have also been subjected to reducing conditions of heat in the kiln, which resulted in the crumbling of the sherds into small pieces; the abundance of small sherds recovered from this period substantiates the hypothesis. All-black and black-and-red wares have a better finish and shiny appearance as a result of burnishing, though 40 per cent of the pots hardly carry any slip at all.

A groove around the neck or the body is noticed occasionally. Incised slashes, pinched marks, finger-tips and twisted cord-designs are some of the decorations. A thin raised band, though irregular, is seen on type 4. Impressions of husk and grass occur mostly on red ware. Graffiti-marks are very rare (below, p. 58). Two painted sherds, one of them carrying a black design on grey ground and the other white on black, are noteworthy.

In spite of the fact that the pottery of this period is in fragments, the available types consist of medium-sized jars, bowls, jars, lids-cum-dishes and stands in order of frequency in all wares. These forms have their own individuality and can easily be isolated from those of the later periods. The nearest parallelism of the majority of the types of this

period is found in several other sites of south India; particular mention may, however, be made of Brahmagiri, Sanganakallu, Maski, Piklibal and Nagarjunakonda.

(ii) *Plain ware*

FIG. 4

Type 1. Wide-mouthed jar with a splayed out and internally carinated rim of grey ware. 12-14 below possibly served for this type as lids which would easily rest on the carination. Of thick coarse fabric, it is burnt grey in section and also has an indifferently-fired surface. It carries a light-red slip on the exterior.

Type 2. Jar of red ware with an out-turned rim. Of thick and very coarse red ware, it is burnt black in section and carries a thin reddish brown slip. A number of horizontal lines run around the neck on the exterior.

Type 3. Vase of coarse red ware with a featureless flaring rim and expanding shoulders. Marks of luting the rim with body at the neck can be seen very clearly on the interior. It is devoid of any slip and burnt grey in section, with uniformly-red exterior and interior.

Type 4. Red ware vase with a mild carination at the neck on the interior. It is of medium size having thin walls and is indifferently fired. The soot-stained exterior indicates its use as a cooking vessel. A thin raised band, irregularly made, runs around the shoulder; impressions of husk can be noticed below the band. *Variant 4a* is smaller but thicker in section. Of medium grey ware fabric, it has a smoothened exterior.

Type 5. Medium-sized vase of grey ware with a featureless out-turned rim and widening shoulder. Of medium to fine fabric, it is treated with a black slip on the exterior and has paring-marks. *Variant 5a* is thicker and coarser than the archetype.

Type 6. Vase of a burnished grey ware with externally cut rim. Of medium to fine fabric, it carries a black slip on the exterior. Marks of luting can be seen on the irregular interior below the neck.

Type 7. Vase of an all-black ware, of medium fabric, with a wide mouth and featureless rim.

Type 8. Bowl of red ware. Of coarse and medium fabric, it is unevenly fired. Paring-marks over the mildly-carinated waist can be noticed. *Variant 8a* is smaller and thinner than above and has more prominent paring-marks below the black-slipped interior. *Variant 8b* has a wide mouth, like a basin, in all-black ware, with grooved exterior and interior besides the shiny surface.

Type 9. Bowl of black ware with a featureless, outcurved rim. Of medium to fine fabric, it carries a shiny exterior. *Variants 9a* and *9b* are smaller and thinner than the archetype and are of fine grey ware, carrying a glossy exterior.

Type 10. Medium-sized bowl of black-and-red ware and of medium fabric.

Type 11. Bowl of black-and-red ware with concave sides and mildly carinated waist.

FIG. 5

Type 12. Carinated medium-sized deep bowl of black ware with a burnished exterior. *Variant 12a* is of black-and-red ware and has a prominently ledged waist. Of medium fabric, it has a glossy appearance on the exterior which may indicate that its exterior was used more often than the interior.

Type 13. Shallow lid-cum-dish of black-and-red ware. Paring-marks below the shiny surface are noticeable.

Type 14. Also lid-cum-dish of black ware of medium fabric, having collared rim and slipped interior. *Variant 14a* differs in having an externally cut rim. It is burnished and is of medium to fine fabric of black ware.

¹The type is commonly met with at the megalithic sites but occurs also at the chalcolithic urn-burial site at Tekwada. See *Indian Archaeology 1956-57—A Review*, p. 19, fig. 8.

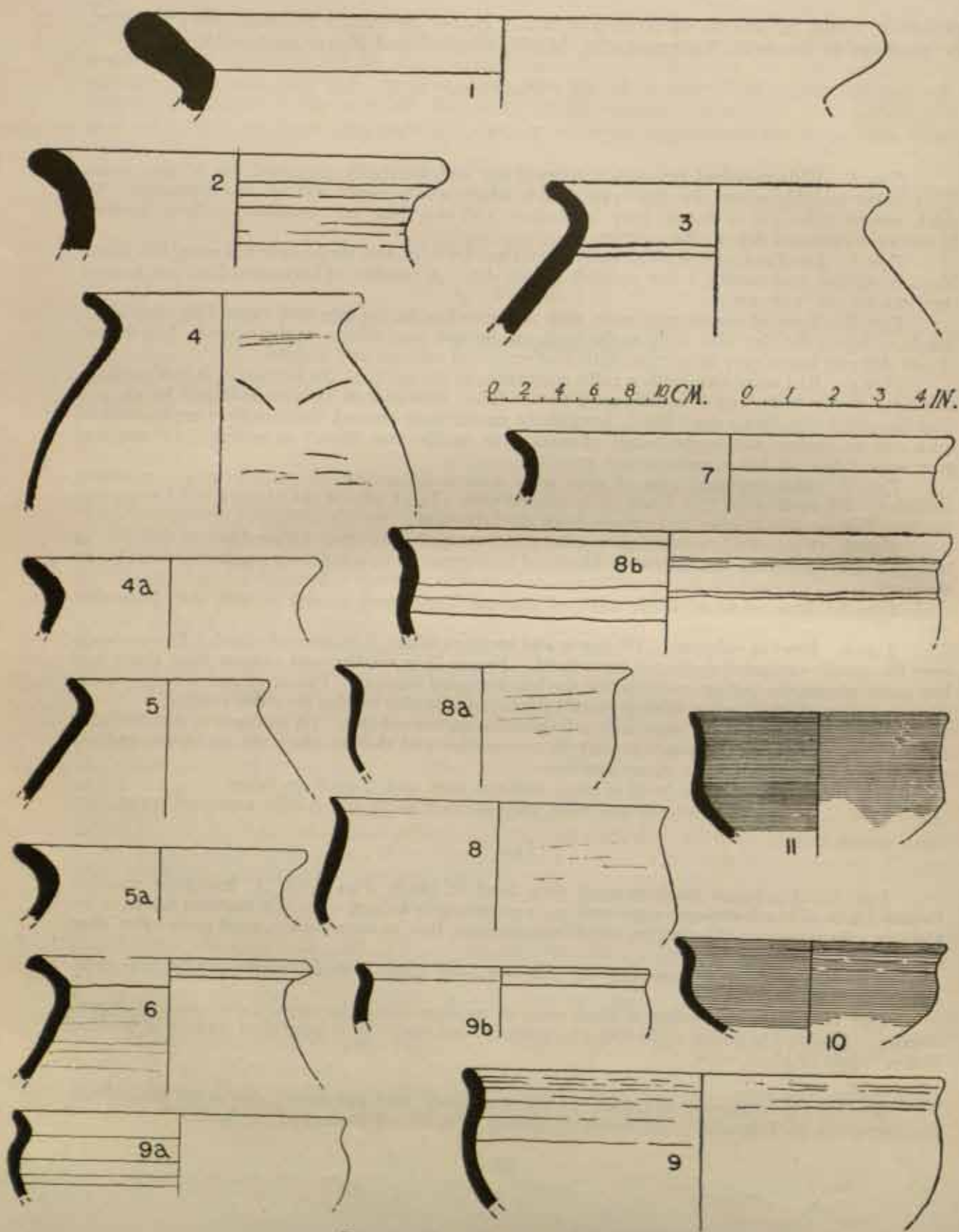


FIG. 4. Pottery from Period I

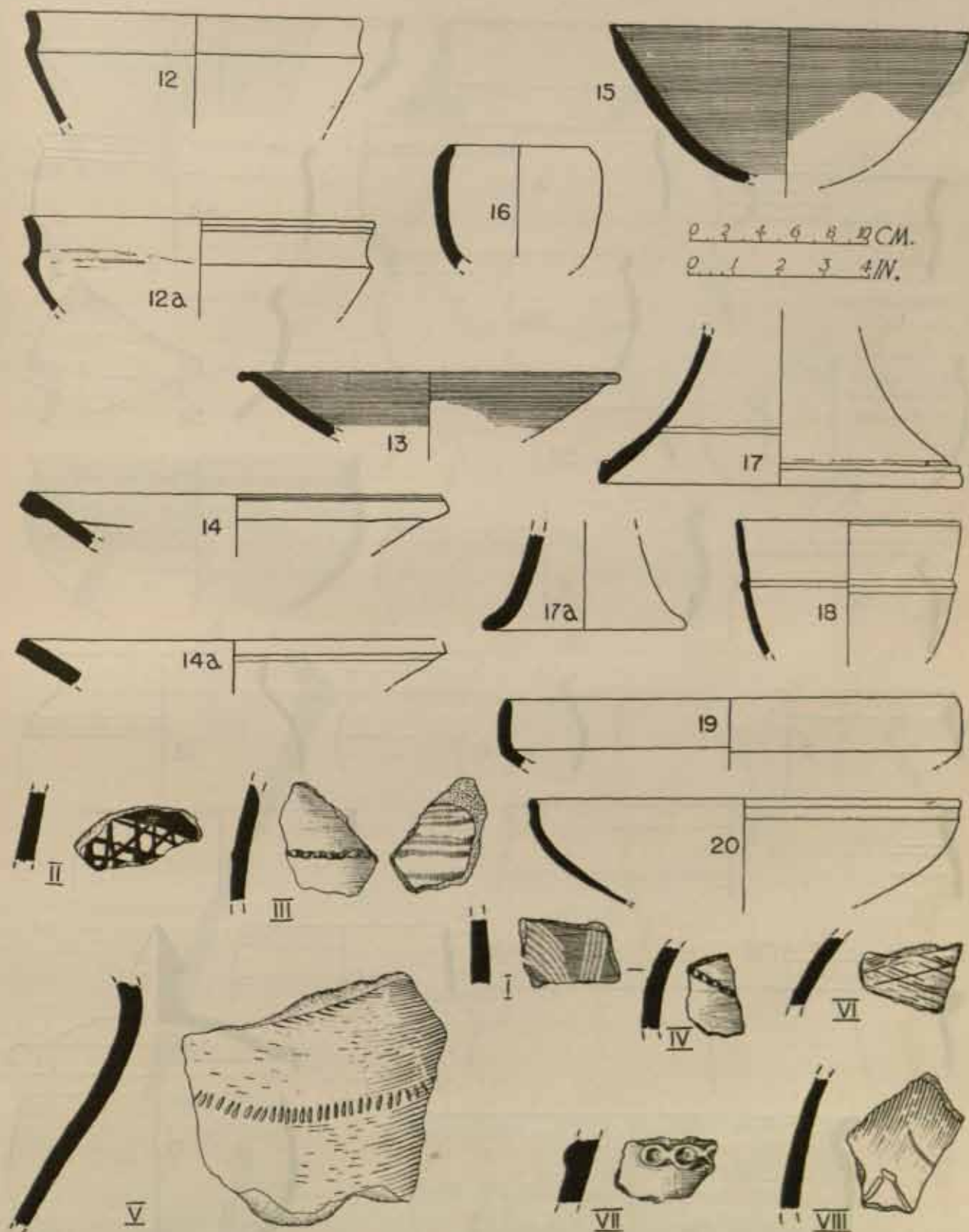


FIG. 5. Pottery from Period I

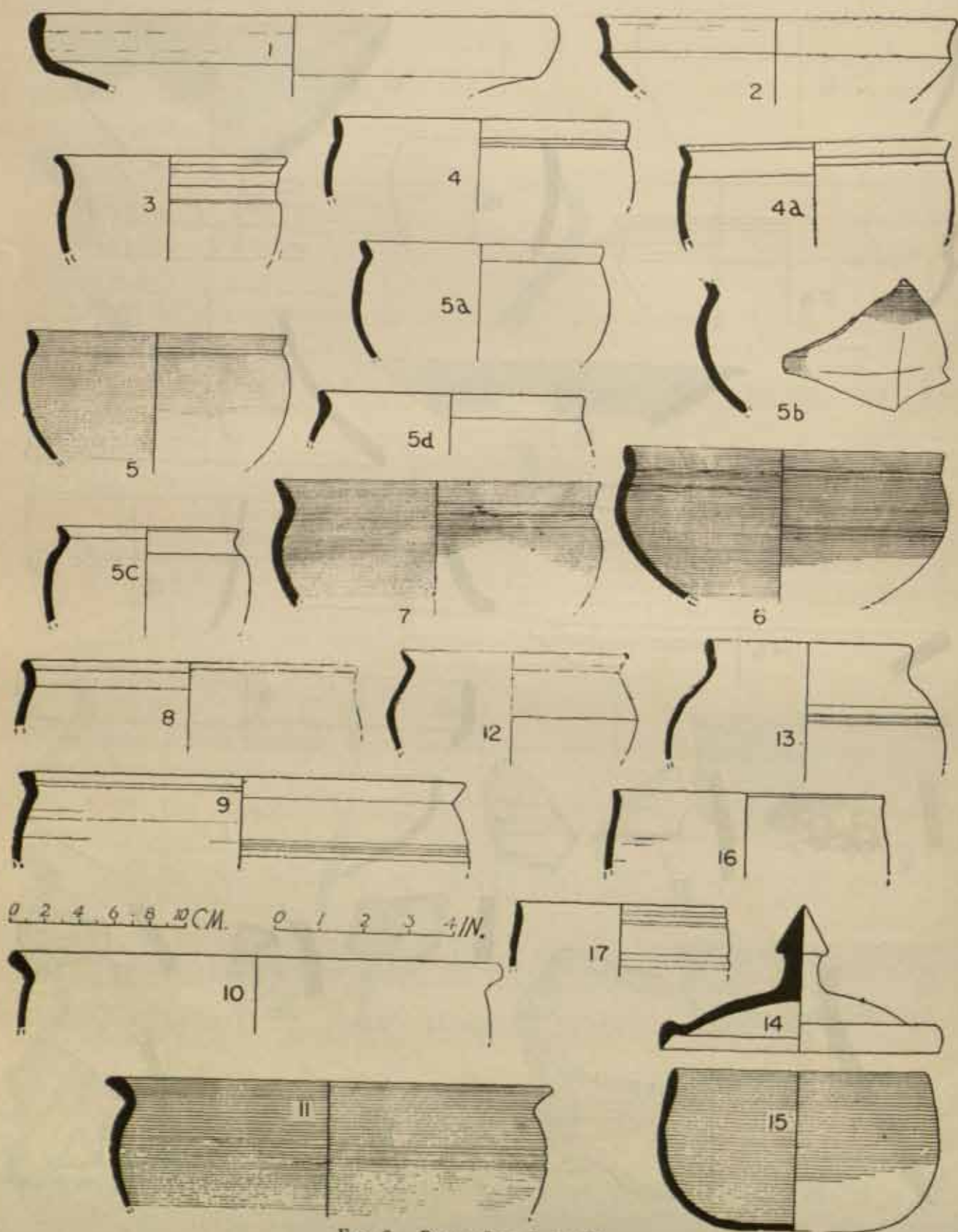


FIG. 6. Pottery from Period II

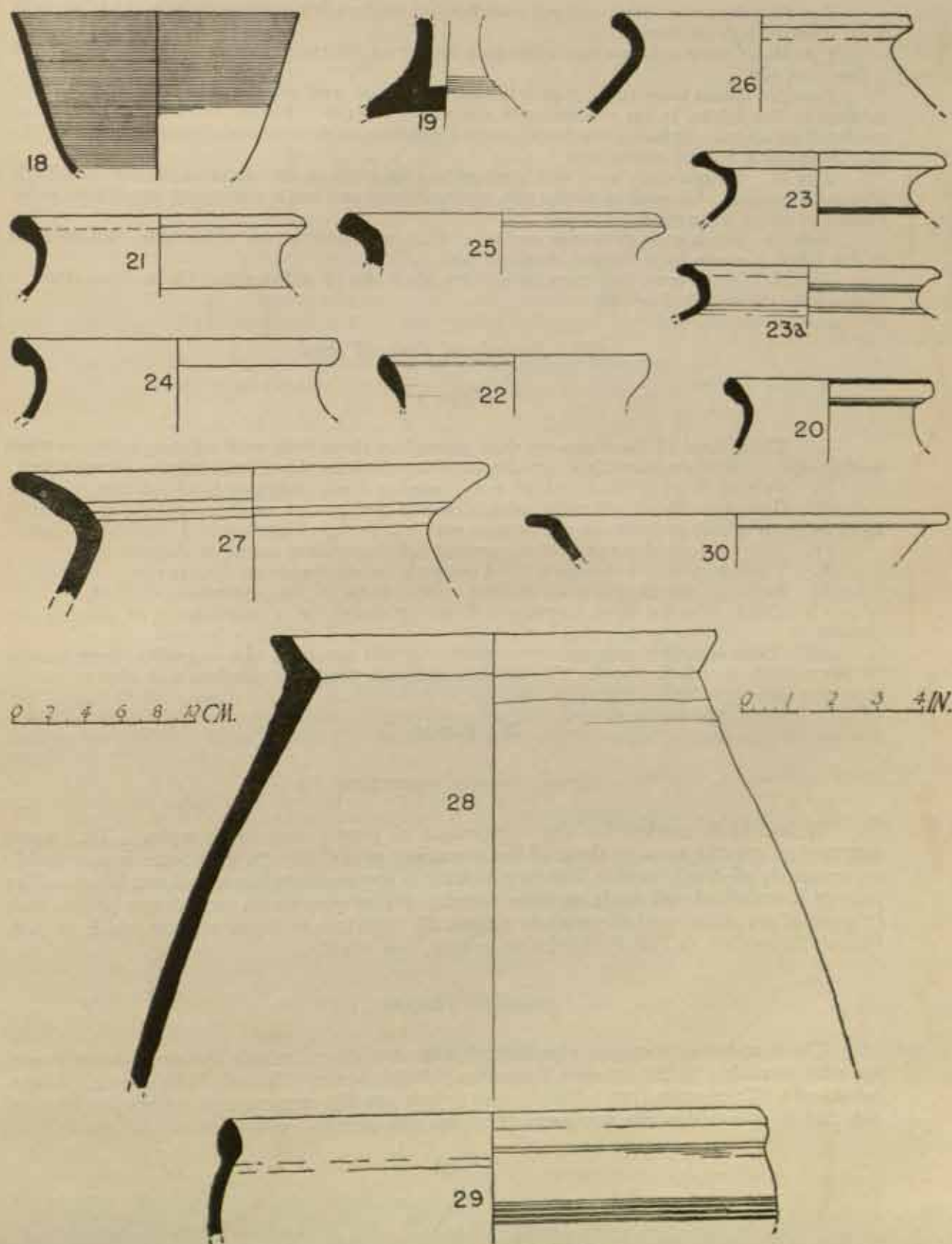


FIG. 7. Pottery from Period II

Type 15. Burnished black-and-red ware bowl of medium fabric comparatively thick but well-fired; it carries a glossy exterior.

Type 16. Coarse red-ware miniature mug having an inturned rim. It is unevenly fired and is devoid of slip.

Type 17. Black ware stand having collared rim-base and elongated narrowing sides. Of medium to fine fabric, it has paring-marks and glossy exterior. *Variant 17a* is in red ware but smaller than above. It has a featureless everted rim-base, and prominent paring-marks on the exterior below a reddish brown slip.

Type 18. Unique deep bowl with a rib around the body on the exterior and correspondingly a grooved interior. Of medium-to-fine red, it is well-fired and has a shiny grey slip on both sides. From the period of overlap.

Type 19. Black ware dish with carinated waist and polished on either side. Of medium to fine fabric it comes from the period of overlap.

Type 20. Black ware dish carrying a shiny black slip on either side. Of medium fabric it comes from the period of overlap.

(iii) *Painted and decorated sherds*

FIG. 5

I. Thick sherd of black-and-red ware painted on the interior with a fading white on black background. It is of medium fabric and carries paring-marks on the exterior below a shiny surface.

II. Painted sherd of black-and-red ware, carrying black design on black interior.

III. Grey-ware sherds, decorated with a twisted cord pattern made by punching the raised band on the black-slipped exterior and painted with black on grey interior.

IV. Dull-red ware decorated sherd, carrying mildly-punched marks on the exterior.

V. Thick grey-ware hand-made sherd carrying incised strokes on the exterior.

VI. Red-ware sherds, marks on exterior appear to be of the impressions of husk.

VII. Thick red-ware sherd, carrying a finger-tip design on a raised band of clay on the exterior.

VIII. Red ware sherd carrying some graffito on the exterior. Its complete form cannot be determined, as it is damaged. The sherd is uniformly fired and carries a thin slip.

B. PERIOD II

(i) *General observations*

Period II is marked by the appearance of purely megalithic types. The wares represented are the same as those of the preceding period though grey ware is very feebly represented; all-black ware is, however, thicker in section than Black-and-red Ware. The pottery is well-fired and made on faster wheel. Wheel-grooves on the interior of the pots in general are scarce and decorations almost nil, slips in use being mostly black or red. Period II yielded an N.B.P. sherd also (above, pp. 40-45).

(ii) *The types*

The number of pots and also their sherds are rather limited; the commonest shapes are also available at Brahmagiri, Porkalam, Maski, Sanur, Piklihal, Yeleswaram, Nagarjunakonda, Kunnattur, etc. Dishes and bowls are the commonest types; jars, basins, lids and lid-cum-dishes are also available from this period.

FIG. 6

Type 1. Dish of black ware with an incurved rim, carinated waist and sagger-base. It is of medium fabric.

Type 2. Sharply-carinated bowl of black ware. Of medium fabric, it carries a black slip on both sides.

Type 3. Deep bowl of black ware, having a ledged shoulder and slipped on both sides.

Type 4 and variant 4a. Deep bowls of all-black ware with featureless rims. Of medium to fine fabric, both have been treated with a glossy black slip.

Type 5 and variants 5a, 5b, 5c and 5d. Black-and-red ware bowls, also typical of megalithic period. Of medium to fine fabric, they are well-fired and have a glossy appearance. *Variant b* bears post-firing graffito. *Variants c and d* are of all-black ware and thicker in section than above.

Type 6. Typical megalithic type of Black-and-red ware bowl.

Type 7. Black-and-red ware bowl of coarse to medium fabric.

Type 8. Black ware bowl of medium fabric, carrying black slip on both sides.

Type 9. Medium-sized bowl of black ware with a flat-topped rim and grooved shoulder. Of medium to fine fabric, it is slipped on both sides.

Types 10 and 11. Bowls respectively of all-black and Black-and-red wares.

Type 12. Small-sized carinated bowl, having a black slip on the exterior and interior up to the rim.

Type 13. Lotā-type of black ware. Of coarse to medium fabric, it is treated with a black slip on the exterior and interior up to the rim.

Type 14. Typical all-black ware lid-type available in megalithic deposits; used possibly as a lid for 15. From a megalithic burial.

Type 15. Black-and-red ware bowl, also typical of megalithic period, with a glossy appearance. From a megalithic burial.

Types 16 and 17. Bowls of Black-and-red ware.

FIG. 7

Type 18. Bowl of well-fired Black-and-red ware with highly-polished sides.

Type 19. Unique base-fragment of thick and coarse grey-ware. It is difficult to surmise its use, as only the stem over the damaged base is available.

Types 20-26. Small to medium-sized pots of red-ware, ranging in fabric from coarse to fine, and coming mostly from early levels. 23 and its variant 23a are unique because of their grooved rims on the interior. Most of them are uniformly fired though black patches can also be noticed on 24 and 25.

Type 27. Thick red ware jar akin to those found in Period I. Of coarse to medium fabric, it is treated with a bright red slip and has a micaceous interior.

Type 28. Red ware jar of huge dimensions. Of medium fabric, it is over-fired and appears to be hand-made.

Type 29. Wide-mouthed basin of red ware, treated with a red slip on both sides and is uniformly fired. Its body is grooved.

Type 30. Red ware lid-cum-dish having a horizontally flaring rim for grip.

G. SUB-PERIOD III A

(i) General observations

Period III gave plenty of pottery with variety of forms, fabric, treatment and decorations. The shapes of the vessels are often indicative of their being put to different uses; for instance, huge troughs and jars were possibly used for storage-purposes, medium-sized *ghaṭas* for fetching water, carinated vessels for cooking, and so on. As usual, the

red ware forms the bulk and is well-fired, though instances of indifferent firing are also not wanting. The fabric ranges from coarse to medium with a little percentage of finer wares; less grit and sand appear to have been mixed in the paste. The entire pottery appears to be wheel-made and the striation-marks are indicative of the use of a fast wheel. The potter, by then, was experienced enough to prepare thin-sectioned pottery, which could be well-fired to make it more durable. This is evident from the availability of fine red-ware types and the local imitation of Rouletted Ware dishes, which are much superior to those meant for common use. There is, however, a deterioration in the quantity and quality of *de luxe* wares. The black-and-red ware is represented by a typical sharply-carinated dish and deep bowl with featureless rim. Decorations are mostly incised slashes, oblique strokes, wavy lines and leaf-designs etc., but applied finger-tip patterns are also there. It is interesting to note that wheel-grooves disappeared completely.

By looking into the decorations it may not be difficult to ascertain as to which type was meant for ceremonial and religious purposes. A decorated sherd (fig. 10, III) having a lotus-design indicates a ceremonial use.

(ii) *The types*

The pottery of this period is comparable with the types occurring at a number of sites in south and north India, like Dharanikota, Nagarjunakonda, Yeleswaram, Kondapur, Salihundam, Brahmagiri, Maski, Arikamedu, Sisupalgarh and Ahichchhatra, etc. The types represented are: bowls (fig. 8, 1-7); dishes (fig. 8, 8-21); basin (fig. 8, 22); lids (fig. 9, 23-29); lamps (fig. 9, 30); vases (fig. 9, 31-38); wide-mouthed vessels (figs. 9 and 10, 39-46); cooking-vessels (fig. 10, 47 and 48); wide-mouthed jars (fig. 10, 49 and 51); troughs for storage (fig. 10, 52 and 53); and sprinklers (fig. 10, 54). Of them the dishes with internally-beaked or chamfered rims are imitations of similar types in the Rouletted Ware and are available in fairly good quantities in Sub-period III A. The lids were used either as lid-cum-dishes or lid-cum-bowls; that they were used as lids is evident from the slip applied on one surface only, the other being intended to remain inside another pot. Some unique red ware vases are strengthened by the provision of internally-collared rims for an easy grip as also for the lid to rest. Small to medium-sized vases, mostly with nail-head and at times with collared rims, are available in large numbers and some of them appear to have been used as *lotās*. Cooking-vessels can be identified from their general shape and also from soot-stains. They are with or without carination at the waist.

FIG. 8

Type 1. Red ware bowl, uniformly fired and carrying reddish-brown slip on both sides.

Type 2. Black ware shallow bowl with mild carination at the waist. Of coarse to medium fabric, it is slipped on either side.

Type 3. Shallow bowl of black-and-red ware. Of medium fabric, it has got a slipped interior.

Type 4. Uniformly-fired black-and-red ware shallow bowl of medium fabric, having shiny appearance. *Variant 4a* is a miniature size in the type.

Type 5. Bowl of black ware with slightly everted rim and multi-grooved exterior. Of medium to coarse fabric, it is slipped on both sides.

Type 6. Deep bowl of black-and-red ware with an everted rim and thin sides. Of medium fabric, it is slipped on both sides.

Type 7. Base-fragment of a black-and-red ware deep bowl. Of coarse to medium fabric, it carries a light slip on both sides.

Types 8-14. Dishes of black-and-red ware, mostly of thick section. While first four are of medium fabric, the latter three, of coarse fabric, have no glossy appearance. 12 is the deepest and has an internally-collared rim like 13.

Type 15. Dish of red ware with internally-cut rim. Of medium to fine fabric, it is treated with a dark pinkish-brown slip, which has turned blackish due to firing.

Type 16. Shallow dish of red ware. Of thick and coarse fabric, it is indifferently fired and is treated with a light brown slip on the interior.

Types 17-18. Dishes of black-and-red ware. 17 has an incurved rim and 18 has thickened one. Both have carinated waists. Of coarse to medium fabric, they are slipped.

Type 19. Dish of red ware with short sides and sagger-base. Of coarse fabric, it is ill-fired and has two vertical lines on the exterior.

Type 20. Thick red ware dish having vertically-incised strokes below the groove on the exterior. It is treated with a bright-red slip on both sides and is well-fired.

Type 21. Dish of all-black ware, shallower and thinner than above. It has an internally thickened rim and is slipped on the exterior.

Type 22. Shallow basin of red ware used for cooking-purposes as indicated by the soot-stained exterior. It has a nail-head rim and is of coarse to medium fabric, treated with a red slip on both sides.

FIG. 9

Type 23. Lid-cum-dish of red ware with a drooping rim. Of coarse fabric, it is ill-burnt and is treated with a reddish brown slip now spoiled due to soot on both sides. It appears to have been used as a lid of a cooking-vessel.

Types 24 and 25. Lid-cum-bowls of red ware with ledged waist, which could rest on the rim of a vessel. Of coarse fabric, they have not been uniformly fired and appear to have been used on the cooking vessels.

Types 26-28. Lids of the medium-sized pots, perhaps meant for containing water. 26 has a horizontally splayed-out rim and conical base, the exterior being rough. Of medium fabric, it is well-fired and treated with a bright red slip on the exterior. 27 has a nail-head rim, is ill-fired and carries a wash. The lower part of the exterior has marks of paring. 28 is akin to above and devoid of any slip, though well-fired.

Types 29 and variants 29a and 29b. Red ware conical bowls, usually having flat bases. All of them have prominent wheel-grooves on either side and are of coarse fabric. They are uniformly fired and devoid of any slip.

Type 30. Fragment of a lamp of coarse red ware having pinched lip for a wick. It is burnt grey in section and is devoid of any slip.

Type 31. Vase with finger-nail decoration on the exterior of the flaring rim. Treated with a bright-red slip on both sides. Of coarse to medium fabric, it is burnt grey in section.

Type 32. Vase with a horizontally-splayed out rim and with a grooved exterior in place of finger-tip decoration. Of medium fabric, it is not uniformly fired.

Type 33. Vase with a horizontally-splayed out rim carries a finger-nail decoration on the exterior and treated with a light reddish brown slip. Of medium fabric it is burnt grey in section.

Type 34. Small-sized vase of red ware with a narrow neck and also treated with a light red slip on the exterior and interior up to the out-turned rim. Of coarse to medium fabric, it is burnt black in section.

Type 35. A coarse red ware vase of a *lotā* type having a grooved exterior. It was treated with a red slip, which has mostly disappeared.

Types 36 and 37. Small to medium-sized vases with nail-head rim, widening profile and wide mouth. 36, which is thinner and well-fired, is treated with a red wash and has a pinkish brown slip on the exterior. 37 has turned dark because of underfiring.

Type 38 and variant 38a. Vases with narrow necks which can very well receive the lids of *Types 26-27*. The widening profile is quite striking and so also the bright red-slip on the exterior and interior up to the rim. Both are of medium fabric and well-fired.

Type 39. Wide-mouthed vessel, with an externally-thickened rim. Of medium fabric, it is underfired.

Type 40. Wide-mouthed vessel with a collared rim. Of medium fabric, it is burnt grey in section and treated with a light-red slip on both sides.

Type 41. Wide-mouthed vessel with a thickened rim and grooved exterior. Of medium fabric, it is uniformly fired and treated with a light-red slip on the exterior.

Type 42. Unique wide-mouthed vessel, with an incurved rim. Uniformly fired, it is of coarse fabric and is treated with a light-red slip.

Type 43. Wide-mouthed vessel with a thickened and internally-recessed rim. Of coarse to medium fabric, it is uniformly fired and treated with a light-red slip on both sides.

Type 44. Wide-mouthed vessel with a nail-head rim. Of coarse red ware, it is overfired.

FIG. 10

Types 45-46. Wide-mouthed vessels with externally thickened and grooved rims. Both are of coarse fabric and burnt grey in section and treated with red slip. 46 differs from 45 in having a long neck and finger-nail decoration on the exterior.

Type 47. A red ware vessel, presumably with a carinated body, now missing. Of medium to coarse fabric, it is treated with a red slip and is soot-stained.

Type 48. With a widening profile and out-turned rim, it is typical of preceding periods. It carries a rectangular graffito (post-firing) on the exterior and is treated with a red slip on the exterior and interior up to the rim. Soot-stains, particularly on the interior, can be noticed.

Types 49 and 50. Wide-mouthed jars with thickened rims, carinated on the interior. Of coarse to medium fabric, they are burnt black in the gritty sections. Both of them carry a red slip on the exterior and interior up to the rim.

Type 51. As above with a drooping rim. Of coarse gritty fabric, it is burnt grey in section and treated with a reddish brown slip on both sides.

Type 52. Typical trough with an internally-thickened rim to receive the lid and externally decorated with a twisted-cord design on a raised band. Of coarse gritty fabric, it is burnt black in section and treated with a bright-red slip on both sides.

Type 53. Disc-base of a trough. Of coarse and gritty red ware, it is burnt black in section and treated with a light red slip. *Variant 53a* is a conical bowl of red ware with disc-base. *Variant 53b* is uniformly fired, while *53a* is burnt grey in section. Both are devoid of any slip.

Type 54. Fragment of a sprinkler of fine red ware. It is well-fired and treated with a pinkish brown slip on the exterior. The central narrow opening is partly visible, while the secondary perforated part is completely damaged.

(iii) *Decorated pottery*

A number of decorated sherds carrying incised, stamped and applied designs have been recorded, but only a few are described here.

I. Fragment of a trough, usually met with in the historical levels having multi-grooved shoulder above wavy design.

II. Shoulder-fragment of a huge jar decorated with a twisted-cord design on a raised band, incised oblique strokes, thin incised lines and double triangles below.

III. Jar-fragment decorated with a lotus-pattern over a twisted-cord design in appliqué.

IV. Red-ware multi-grooved fragment carrying irregularly incised and notched dots between the grooves.

V. Black-slipped sherd having incised leaf-design.

VI. Red-ware sherd having incised leaf-design within grooves.

- VII. Red ware sherd having incised dots below an irregularly-made leaf-design.
- VIII. Red ware sherd having vertically-incised lines on one of the two horizontal grooves.
- IX. Sherd with incised lines along the body.
- X. Sherd with graffito in the form of a cross below the grooved neck.
- XI. Body-fragment of a red ware jar having a pair of perforations. This type appears to have been used for keeping the fire burning. The air could pass through the perforations. The interior is indicative of its being in touch with fire constantly.

(iv) *The Rouletted Ware*

FIG. 11, 1 to 12

All the ten rim-sherds of the Rouletted Ware have typical internally-bevelled rim and differ only in shades of the surface. The core is invariably grey. 11 and 12 are fragmentary bases having rouletted marks on the interior, but from their shapes and fabric the rest, 1 to 10, may be reasonably regarded as belonging to the same class.

(v) *Pottery discs*

FIG. 11, A to F

A number of circular discs made out of the broken pot-sherds, by rubbing their broken sides, have been recovered. The children are likely to have used them for playing a game known as *gippi* which is very common even today. But they could have been used as weights also. Such circular sherds of various sizes and thicknesses have been reported from a number of historical sites. Only six examples have been illustrated here. E is of fine red ware carrying polished sides, while F, which is the smallest, is slipped on the exterior only (below, p. 74).

D. SUB-PERIOD III B

(i) *General observations*

This sub-period is distinguished from the preceding one by the absence of the Rouletted Ware. Moreover, the quantity of the pottery also decreases. The types available are much less than found in Sub-period III A. The form, fabric, firing and finish, etc., are, however, similar in both the Sub-periods.

(ii) *The types*

The following types are represented: bowls (fig. 12, 1, 2 and 14); dishes (fig. 12, 3 and 4); lids, also used either as bowls or dishes (fig. 12, 5-7); vase (fig. 12, 8); medium-sized pots (fig. 12, 9 and 10); carinated vessels (fig. 12, 11); wide-mouthed jars (fig. 12, 12); spouted vessels (fig. 12, 13); and jars (fig. 12, 15).

FIG. 12

Type 1. Bowl of black-ware with an everted rim and multi-grooved exterior. Of coarse fabric, it is slipped on the exterior and interior up to the rim.

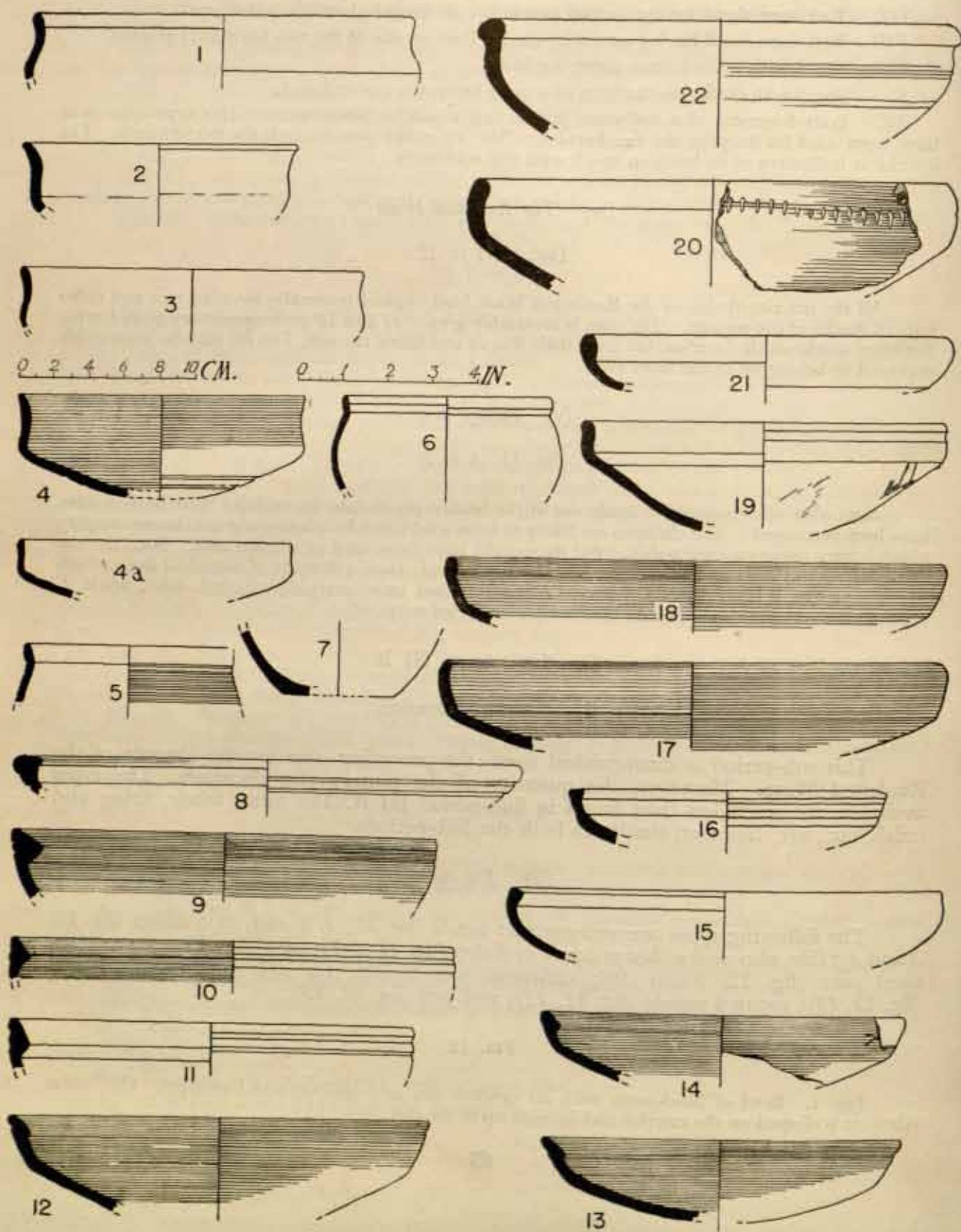


FIG. 8. Pottery from Sub-period III A

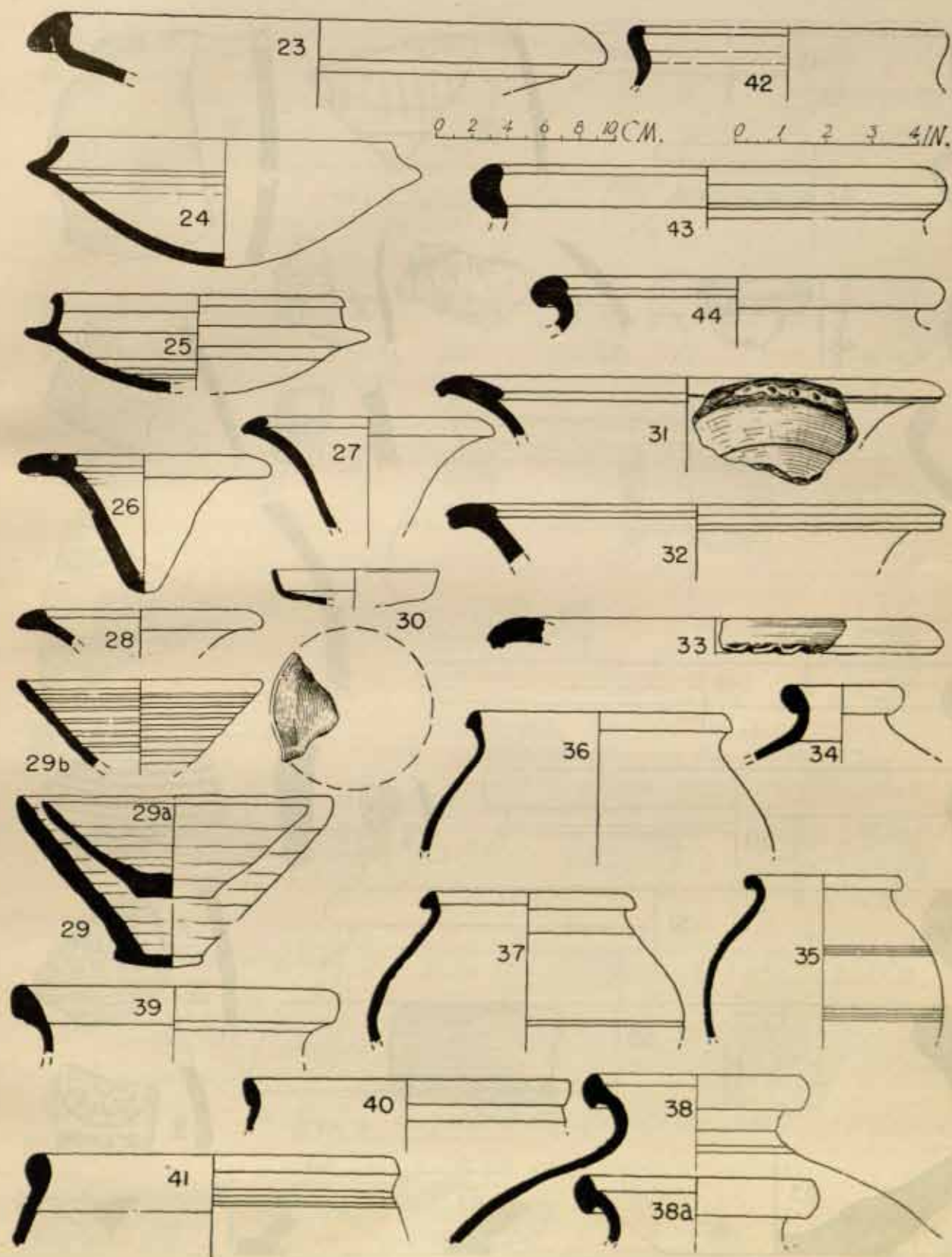


FIG. 9. Pottery from Sub-period III A

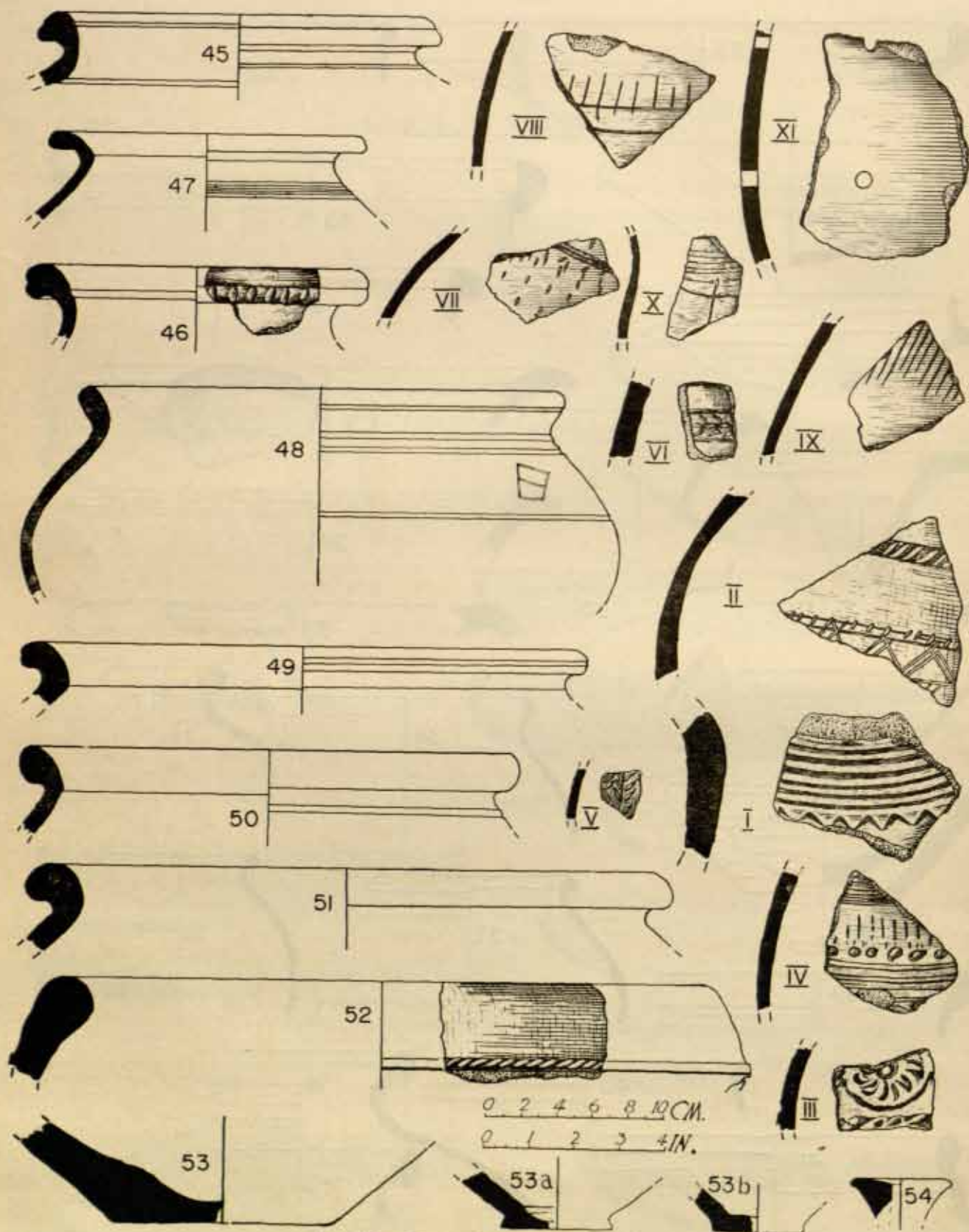


FIG. 10. Pottery from Sub-period III A

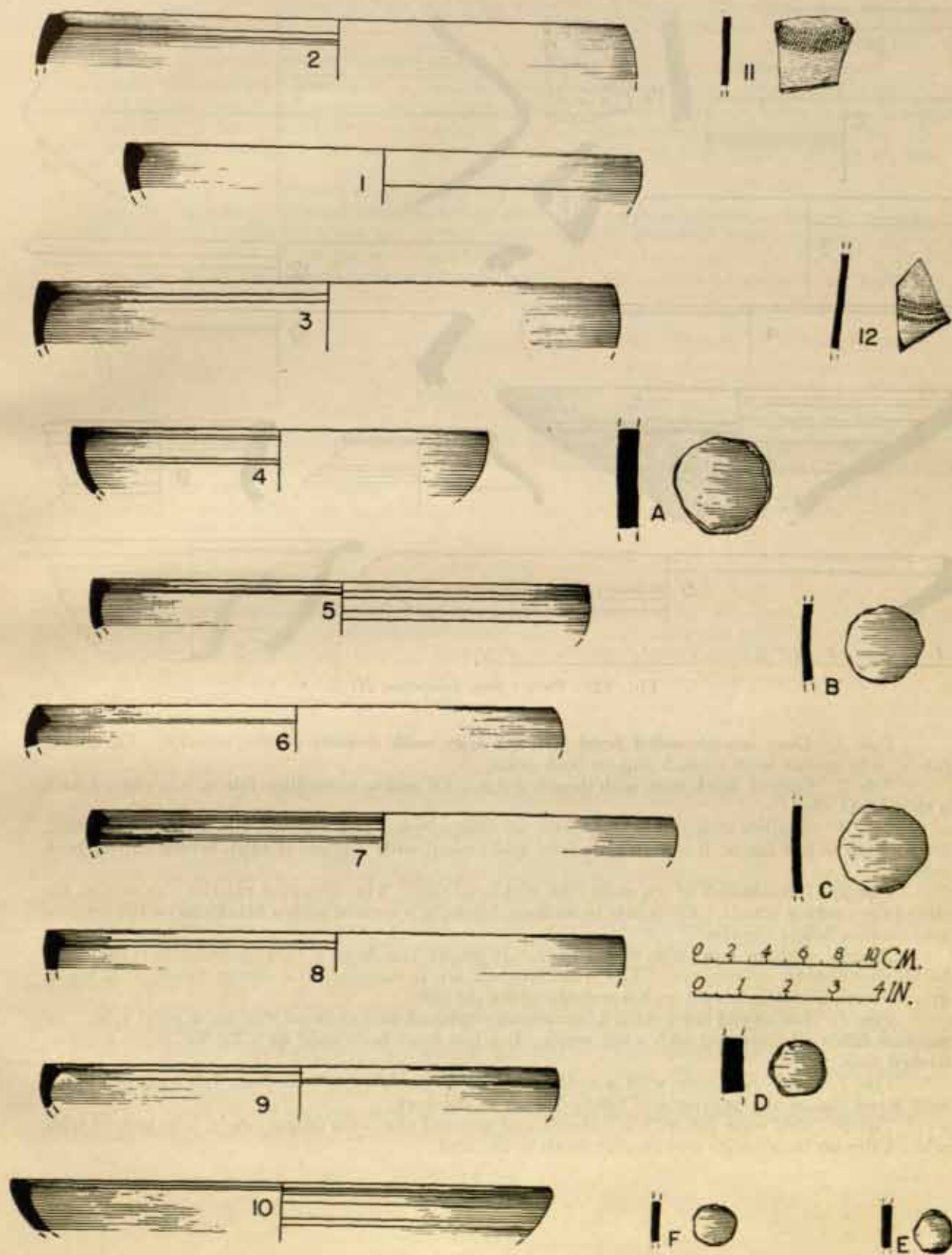


FIG. 11. Pottery from Sub-period III A

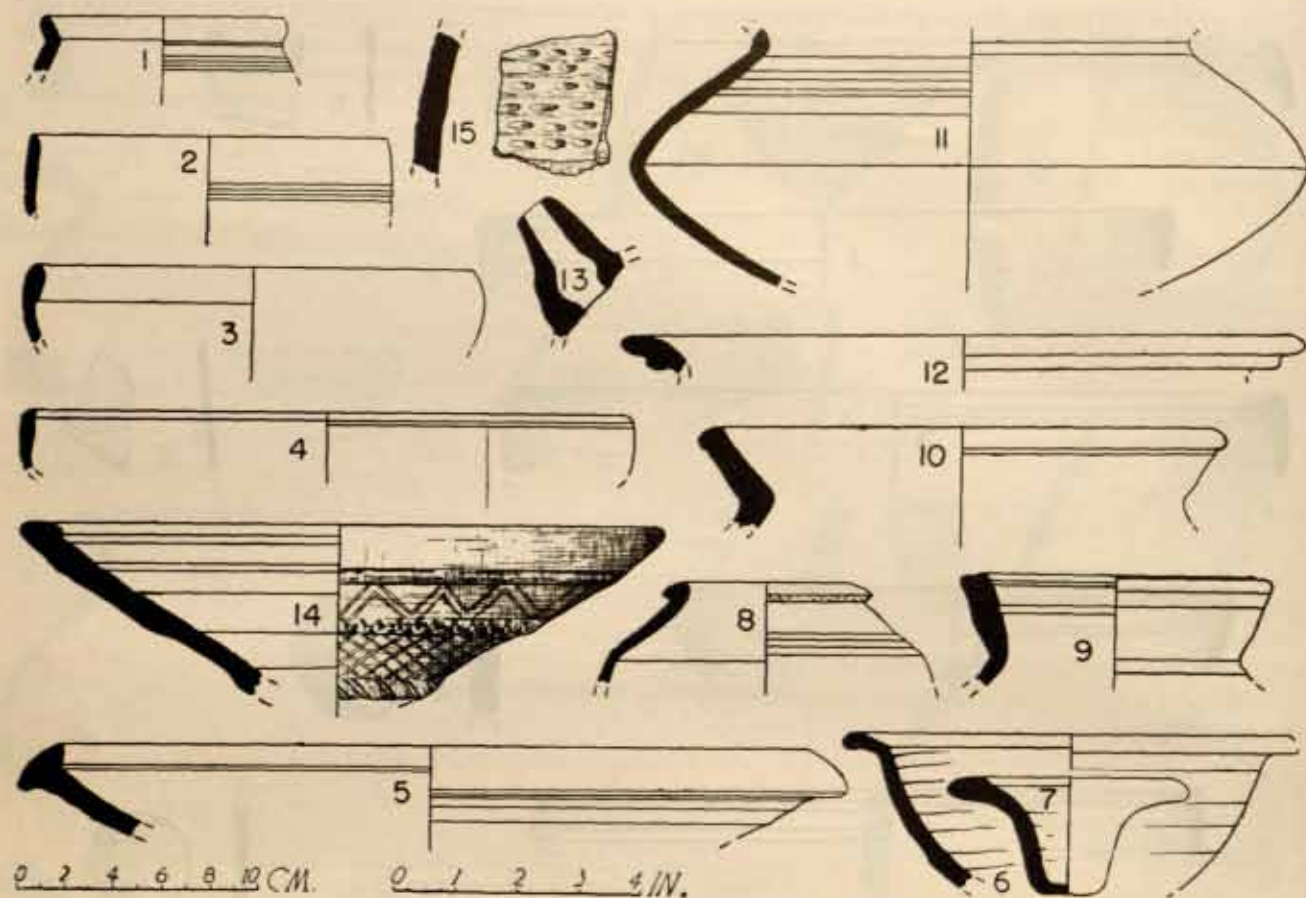


FIG. 12. Pottery from Sub-period III B

Type 2. Deep straight-sided bowl of black ware with grooves on the exterior. Of coarse fabric, it is treated with a black slip on both sides.

Type 3. Dish of black ware with incurved rim. Of coarse to medium fabric, it is treated with a thin black slip.

Type 4. Shallow dish of red ware with an obliquely-cut and grooved rim and straight sides. Of medium to fine fabric, it is uniformly fired and treated with a glossy reddish-brown slip on both sides.

Type 5. Lid-cum-dish of red ware with nail-head rim. The drooping exterior can rest on the rim of the cooking vessels. Of coarse to medium fabric, it is treated with a black slip on the interior and exterior below the rim.

Type 6. Lid-cum-bowl type of red ware. It might have been a cooking-vessel as is indicated by its soot-stained appearance. The wheel-grooves are prominent. Of coarse fabric, it is burnt grey in section and is treated with a red slip along the rim.

Type 7. Lid of red ware with a horizontally-splayed and collared rim for a good grip. Of medium fabric, it is treated with a red ware. It might have been used as a lid for some narrow-necked vase.

Type 8. Red ware vase with a mildly-carinated shoulder. Of medium fabric, it is treated with a red slip on the exterior and interior down to the neck.

Type 9. Red ware pot with a collared and grooved rim. Of coarse fabric, it is treated with a black slip on the exterior and interior down to the neck.

Type 10. Wide-mouthed red ware pot with a thickened rim and carinated neck on the interior for a lid to rest. Of coarse to medium fabric, it is treated with red slip on both sides and is burnt grey in section.

Type 11. Red ware carinated vessel meant for cooking. The lower half below the carination is completely soot-stained. Of coarse to medium fabric, it is burnt grey in section and is treated with a red slip on the exterior down to the carinated waist. The wheel-grooves are very prominent.

Type 12. Wide-mouthed jar with a splayed-out rim which is recessed on the exterior. Of coarse to medium fabric, it is burnt grey in section and treated with bright red slip on the exterior only.

Type 13. Spout of red ware, treated with red slip.

Type 14. Unique red ware bowl profusely decorated on the exterior. Incised triangles between the raised bands—the lower one further notched with finger-nails—have an incised check-pattern over the finger-nail pattern on applied band.

Type 15. Jar of red ware carrying notched dots between the horizontal grooves. Of medium fabric, it is well-fired.

E. PERIOD IV

(i) General observations

The pottery from the uppermost levels of this site consists of red, grey and black wares in order of frequency. It is mostly of coarse fabric, but a few instances of medium-to-fine fabric are also not wanting. The coarse grey ware of this Period resembles very much the early medieval ware from Nagarjunakonda, Yeleswaram, Dharanikota, etc.

(ii) The types

The following types are available: small-sized deep bowls (fig. 13, 1 and 2); shallow and deep dishes (fig. 13, 3-7); lids, which could also be used as bowls and dishes (fig. 13, 8-11); medium-sized pots (fig. 13, 12 and 13); cooking-vessels (fig. 13, 14-16); vases (fig. 13, 17-19); and troughs (figs. 13, 20 and 14, 21-23). The commonest types are 3, 9, 10 and 19, besides decorated examples.

FIG. 13

Type 1. Black ware bowl with a thickened rim and multi-grooved exterior. Of coarse fabric, it is devoid of any slip.

Type 2. Black ware bowl with a sharpened rim and straight sides. Of coarse fabric, it appears to have been treated with a thin black slip, which has disappeared.

Type 3. Red ware dish with an internally thickened rim. Of medium to fine fabric, it is uniformly fired and treated with a thin reddish-brown slip on the interior.

Type 4. Dish with a mouth wider than the above and an internally-cut and grooved rim. Of medium fabric, it is indifferently fired and treated with brown slip on the interior.

Type 5. Dish, deeper than 3 and 4, with a multi-grooved exterior. Of medium to fine fabric, it is treated with brown slip on the exterior.

Type 6. Dish of black-slipped ware. It differs from 4 in having a coarse fabric and a pair of deep grooves running around the neck.

Type 7. Dish of black-slipped ware with a flat rim and grooved exterior.

Type 8. Red ware lid-cum-dish with a mildly-carinated waist. Of coarse-to-medium fabric, it is well-fired and carries red wash on the interior and exterior down the waist.

Type 9. Lid-cum-bowl of coarse grey ware with a vertical side and prominently-flanged waist, which could rest on another pot. It is devoid of any slip.

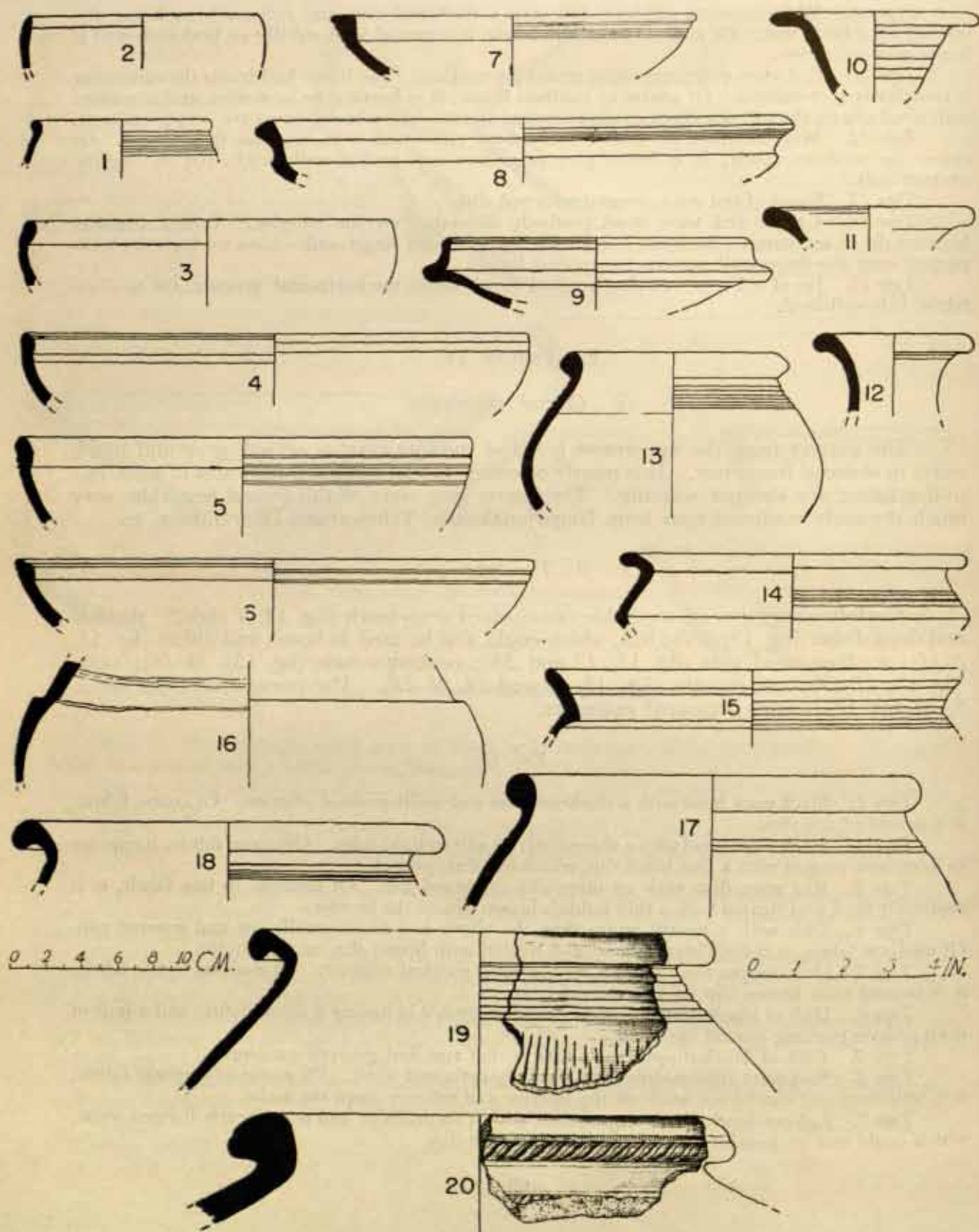


FIG. 13. Pottery from Period IV

Type 10. Deep lid of coarse red ware with a horizontally splayed-out rim for good grip. Striation-marks are prominent on the interior and grooves on the exterior. It is devoid of any slip.

Type 11. Rim-fragment of the type represented by 10. Of medium fabric, it is well-fired and treated with red slip.

Type 12. Small-to-medium pot of red ware, with an elongated narrow neck and possibly a globular body. Of coarse-to-medium fabric, it is burnt grey and is treated with a dark-brown slip on the exterior only.

Type 13. A *lotā* type with a thickened rim and grooved shoulder. Of coarse-to-medium fabric, it is uniformly fired and treated with a light-red slip on the exterior down to the waist.

Type 14. Carinated cooking-vessel of red ware with a completely soot-stained base of coarse to-medium fabric, it is devoid of any slip.

Type 15. Grey-ware cooking-vessel with sharply-carinated internal neck. Of coarse gritty fabric, it is devoid of any slip.

Type 16. Rare red ware vessel having a prominently-ledged shoulder for receiving lid (cf. 9). Of medium to fine fabric, it is treated with a bright-red slip on the exterior.

Type 17. Red ware vase with an externally-thickened rim and expanding profile. Of coarse fabric, it is ill-fired and treated with a light-red slip down to the shoulder. This appears to have been placed on the oven for boiling milk or water or a similar purpose, as indicated by its soot-stained sides.

Type 18. A red ware vase with an externally-drooping rim and perhaps expanding shoulders. Of coarse fabric, it is unevenly fired and devoid of any slip.

Type 19. It is bigger than above and has multi-grooved shoulder above vertically-incised lines. Of coarse gritty fabric, it is treated with a light red slip on the exterior.

Type 20. A thick red ware trough with an externally-thickened rim, decorated with a finger nail pattern. Of coarse red ware, it is burnt black in section and treated with a bright red slip on the exterior.

FIG. 14

Type 21. Trough with a wide mouth, externally-thickened rim and multi-grooved shoulder. Of coarse red ware, it is uniformly fired and treated with a light-red slip on the exterior and interior up to the neck.

Type 22. Trough with an externally-collared rim and widening sides. Of coarse gritty fabric, it is uniformly fired and treated with a bright red slip on the exterior and interior up to the rim.

Type 23. It is the largest trough and has incurved and externally-prominent collared rim. Of coarse red ware, it is burnt black in section and treated with a red slip on the exterior alone.

(iii) Decorated pottery

The following are the typical decorations on pots, all recovered in fragments.

I. Red ware fragment of jar, having incised decorations of oblique strokes and six-petalled lotus on one side and shooting leaves with stems on the lower half.

II. Red ware shoulder-fragment with incised herring-bone design over the eight-petalled incised lotus, from which the loops are shooting on one side.

III. Red ware sherd with incised oblique strokes between incised grooves.

IV. Red ware sherd with decorated incised pairs of triangles in rows between the notched strokes.

V. Red ware sherd with twisted-rope pattern.

VI. Red ware sherd with applied bands bearing finger-tip and rope patterns.

VII. Thick red ware sherd with applied band of finger-tip design.

VIII. Red ware sherd having rows of oblique incisions on the body.

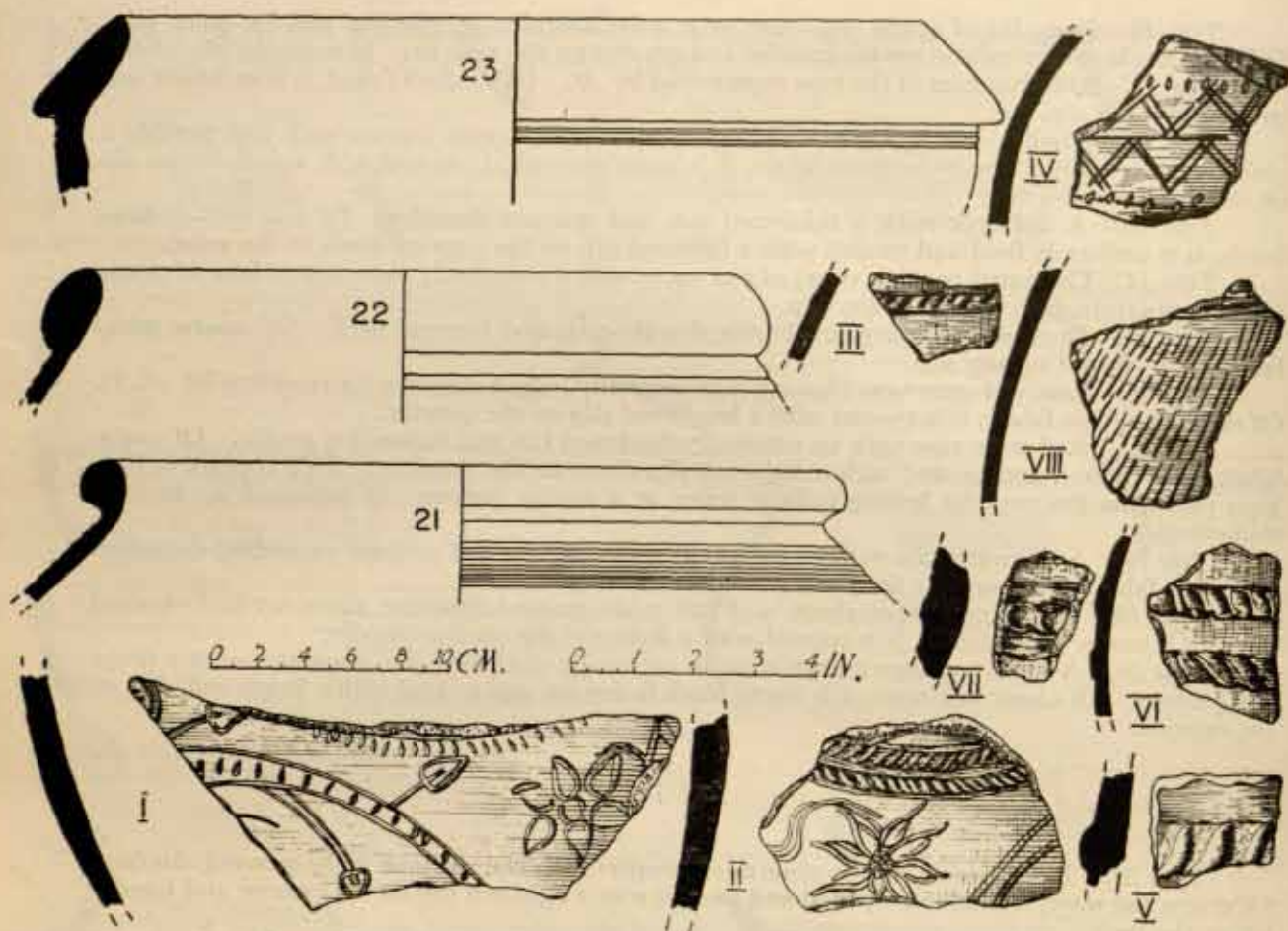


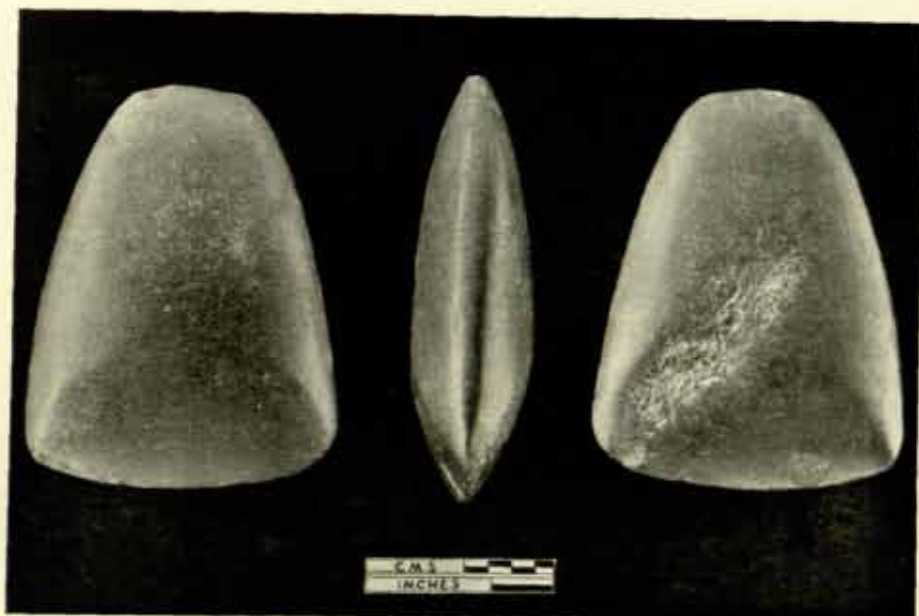
FIG. 14. Pottery from Period IV

11. OTHER SMALL FINDS

The small finds from Kesarapalle recovered either in excavation or on the surface may be described under the following seven heads: neolithic polished stone axes, beads, terracotta objects, metal objects, bone and shell objects, stone objects, and pottery discs.

A. NEOLITHIC POLISHED STONE AXES

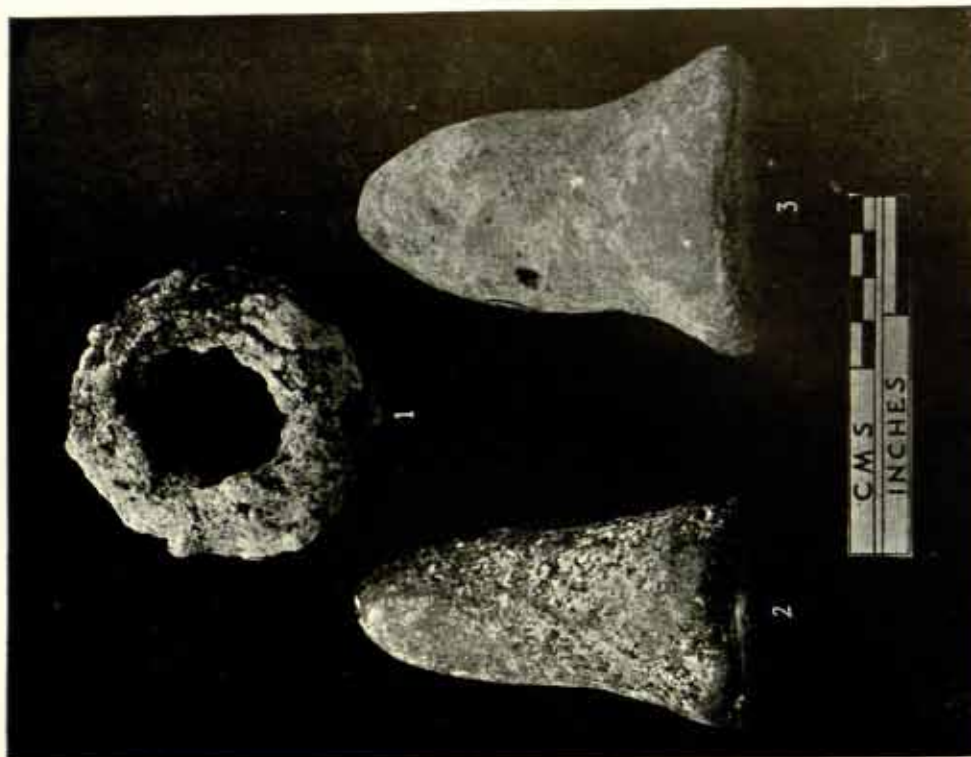
Both the specimens, from the surface, are without any pointed butt and are roughly trapezoid in outline. Specimen 1 (pl. XXIII A), measuring 8.1×6.2 cm., is a fully-polished example on trap with lenticular medial cross-section and slightly-convex cutting-edge; butt-end, though thin, is also slightly convex. It is an evolved specimen without any parallel in the neolithic assemblage of Nagarjunakonda. The other specimen, 2 (pl. XXIII B) is made of granite and measures 8.3×6.2 cm. Polishing on it does not extend beyond the cutting-edge which has a greater convexity than the



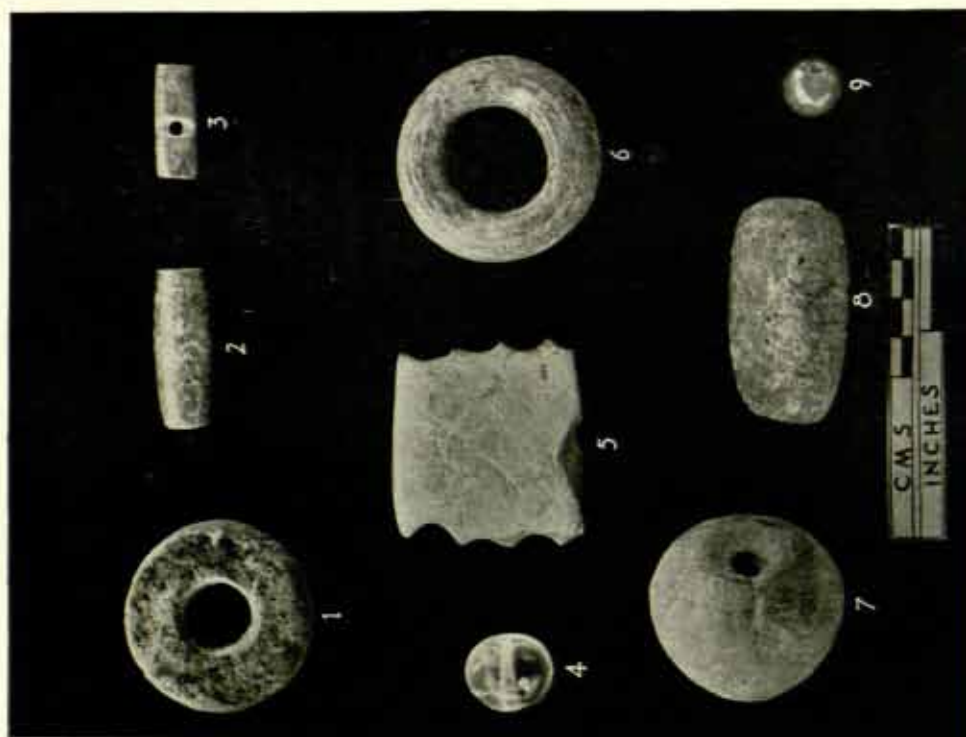
A. *Kesarapalle: neolithic tool from surface. See p. 72*



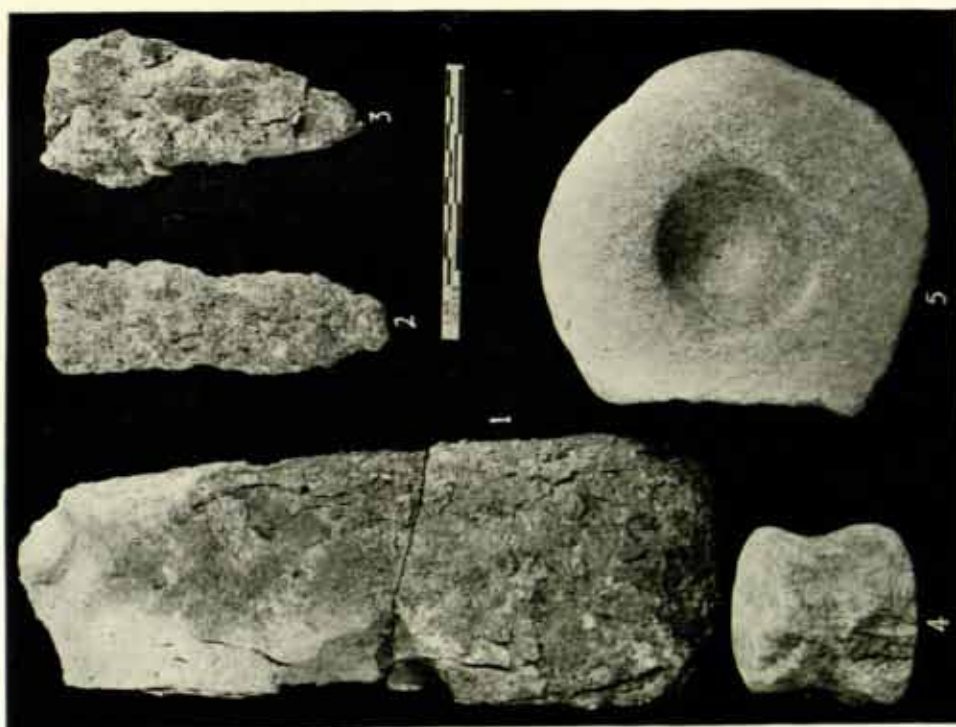
B. *Kesarapalle: neolithic tool from surface. See p. 72*



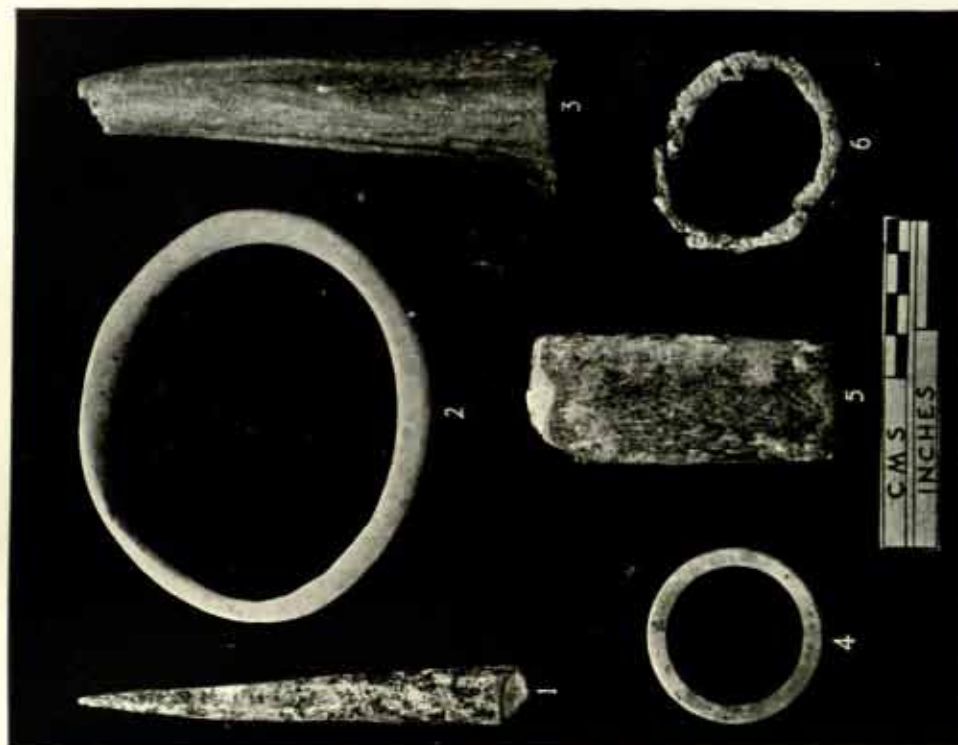
B. Kesarapalle: an iron ring and terracotta conical objects.
See pp. 73 and 74



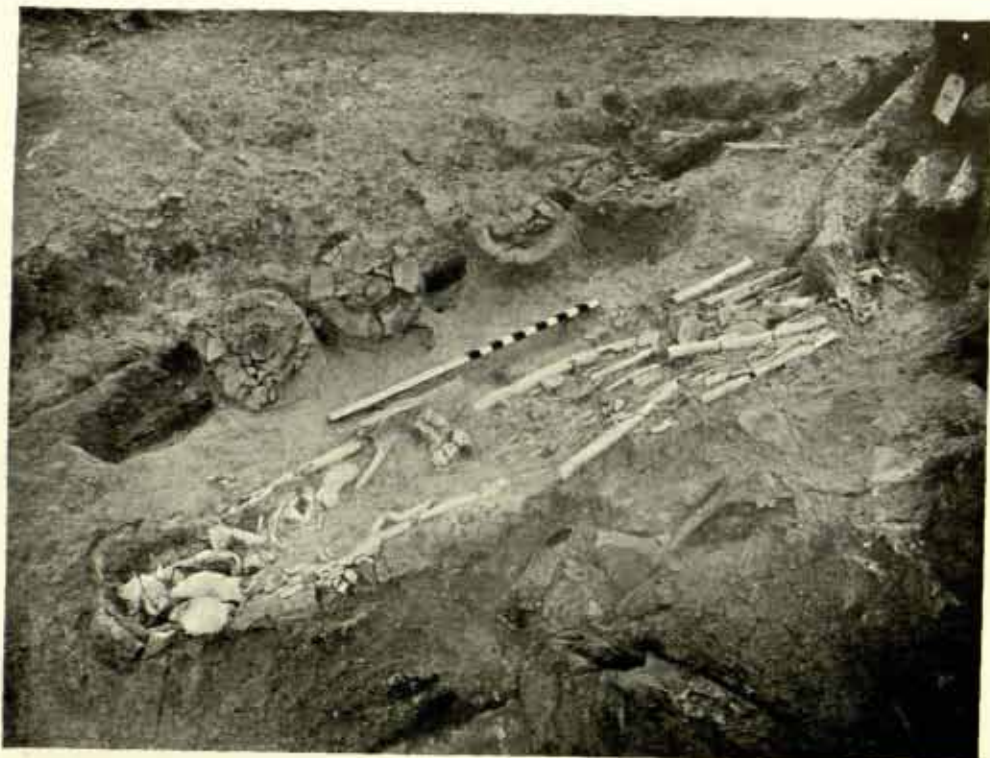
A. Kesarapalle: beads and terracotta objects. See p. 73



A. Kesarapalle: metal and stone objects. See p. 74



B. Kesarapalle: objects of bone, shell and iron. See p. 74



A. Nagarjunakonda: megalithic burial pit. See p. 49



B. Motadaka: general view of megaliths. See p. 48

former. With a roughly elliptical cross-section it has a splayed-out lower half and a blunted butt-end.

B. BEADS

Altogether fourteen beads, besides six from the surface, were discovered from the excavation. Terracotta, stone, bone and copper formed the primary bead-material. The one in copper is of cylinder-circular type coming from Period II. Of the six specimens of spherical beads, five are made of stone, while one from the surface, is of terracotta: this shape was confined only to Periods II and III. A terracotta spacer, oblong in shape with four horizontal perforations, came from the late levels of Period I and had its analogue in bone recovered from Period II. No glass bead was encountered in the excavation; the solitary specimen of long-cylinder-circular bead of green translucent glass came from the surface. Stone beads conform to two shapes only, viz., spherical and barrel-cylinder-circular. A cylinder-square specimen of lapis lazuli, recovered from Period III, shows a perforation in the centre, suggesting its use as a pendant. There are two specimens of barrel-circular-cylinder bead, one of jasper and the other, an unpierced one, of terracotta; the former came from Period II. Thus, while Period I yielded only one terracotta spacer, the megalithic levels produced not only a spacer but also types like barrel-circular, cylinder-circular and spherical beads.

The following selected specimens are illustrated:—

Pl. XXIV A

2. Jasper; barrel-circular-cylinder. From KSP-2, Period III A.
3. Lapis lazuli; cylinder-square with a central perforation. From KSP-2, Period III A.
4. Rock-crystal; spherical. From KSP-2, Period II.
5. Terracotta; spacer-bead with four horizontal perforations parallel to each other. From KSP-1, late level of Period I.
7. Terracotta; pear-shaped. From KSP-2, Period III B.
8. Terracotta; cylinder-circular, unpierced. From KSP-2, Period II.
9. Carnelian; spherical. From KSP-2, Period III A.

C. TERRACOTTA OBJECTS

The total number of terracotta objects obtained in the excavation was only four but functional value of all these specimens is difficult to guess. These may be divided into two groups, viz., cones and rings, the latter variety being confined to Period II only. The conical terracotta object, from Period I, has a defined base with a perforation thereon for suspension (pl. XXIV B, 3). It represents a phallic symbol which could have been used as an amulet or pendant. No arrangement for suspension is, however, noticed in the other example (pl. XXIV B, 2) collected from the megalithic burial. The terracotta rings, annular in shape, are common in the finds of the megalithic burials; pl. XXIV A, 1 and 6, may even be called as whorl bead on the analogy of Brahmagiri, although the necessity of providing such big holes in a bead cannot be explained easily.

D. METAL OBJECTS

The number of iron pieces, mostly of indeterminate shape, is about fifteen of which three specimens—one spear-head (pl. XXV A, 2) a wedge (pl. XXV A, 1) and a piece of indefinite shape—came from the area of megalithic burial. A fragment of spear-head (pl. XXV A, 3), was recovered in regular excavation from Period II. The most common type in the historical level is a nail with bent head. An iron ring (pl. XXIV B, 1) of indefinite use and a bangle (pl. XXV B, 6) were obtained from Sub-period III A.

Besides the lead coin referred to earlier (above, p. 52), two copper specimens excluding the bead (above, p. 73) mentioned above, were found in Period III. One of them is a small rectangular piece and the other a ring, represented by two fragments.

E. BONE AND SHELL OBJECTS

Mention has already been made (p. 43) of the occurrence of a bone spacer-bead (pl. XXIV A, 5) in Period II. Other finds of this group comprise shell bangles (pl. XXV B, 2 and 4) and two bone points (pl. XXV B, 1 and 3) belonging to Period I. One of the last-mentioned specimens has a sharp pointed end and a polished surface. Shell-bangles and rings came only from Period III.

F. STONE OBJECTS

This group includes a stone dabber (pl. XXV A, 4) from the surface and a colour-grinder (pl. XXV B, 5) from Period II, both being potter's artefacts.

G. POTTERY DISCS

The group formed the bulk of the finds in the excavation and occurred in all Periods. A total number of twenty-nine specimens of circular pottery discs were discovered, ranging in diameter from 20 to 52 mm., the maximum concentration being in the group varying from 30 to 39 mm. (ten specimens) and from 40 to 49 mm. (twelve specimens). There are four examples with a diameter of 33 mm., three of them coming from Period I. Besides circular ones, two oblate specimens were also noticed. Such unpierced discs are of uncertain use (above, p. 63), though generally these are identified as gaming-counters used by children in games like hopscotch (fig. 11, A to F).

[Received on the 2nd March, 1965,—Ed.]